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ABSTRACT

A party of vocational educators from the United Kingdom (UK) traveled to the Federal Republic of Germany (FRG) to observe current experiments with the first year of apprenticeship training or, as it is called in Germany, the Berufsgrundbildungsjahr (BGJ). During its study, the visiting party focused its attention on the objectives, design, curriculum, and principal teaching methods used in the BGJ. The observers found that the BGJ, which has been designed as an alternative to the first year of traditional apprenticeship in the dual system for education and apprenticeship and which provides training in 13 basic vocational areas, provides a greater educational opportunity for school leavers in the 16-19 age range than do any currently available programs in the UK. Furthermore, the BGJ enjoys the strong support of employers, unions, the educational community, parents, and students in the FRG. Based on their observations, the investigators developed a series of recommendations calling for the development and implementation of a similar program in the UK. (Appendixes to this report include a discussion of the dual system and more detailed suggestions for the implementation in the UK of the visiting party's proposals.) (MN)

Studies in Vocational Education and Training in the Federal Republic of Germany

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EXPERIMENTS WITH THE FIRST YEAR OF APPRENTICESHIP IN THE FEDERAL REPUBLIC OF GERMANY

The Report of a Visiting Party

Edited by Russ Russell and Michael Neale

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PREFACE TO FIRST EDITION

This report is made by a party of practitioners in Vocational Education from the United Kingdom who visited the Federal Republic of Germany in November 1981. The visit was organised by the Further Education Staff College - FESC - (Coombe Lodge) and the British Council as one of a series of visits being planned and co-ordinated jointly by the FESC and the British Council at the request of the Department of Education and Science. The main travel expenses are being met by the Central Bureau for Educational Visits and Exchanges, while the main administrative expenses are being met by the British Council.

The United Kingdom - UK - and the Federal Republic of Germany - FRG - have similar industrial structures, comparable populations, and broadly similar patterns of vocational education and training, youth unemployment and ethnic minorities. There are constitutional, organisational and financial differences between the two vocational education and training systems but they both share the characteristic of having a dispersed pattern of authority which makes change slow and necessitates that change is made by agreement and is frequently developmental rather than radical.

It would seem therefore that the British can gain most in any comparative study of UK and FRG from developing an understanding of how the German system works in terms of the motivation and attitudes of its young people towards mobility, industrial co-operation and the quality of their work and social participation. In other words it is in the content and process of the German approach that the British interest principally lies. Attention is being paid to the attitudes of employers, trainers, trade unions and of the wider society to the young people because that can also provide understanding of the sources of the attitudes.

The visiting party was selected from a list of nominations in order to give an appropriate mixture of types of responsibility and experience for the study topics in mind. Further details of the visiting party and of the process of writing the report are given in Appendix F to this report. Although the visiting party was briefed before leaving for FRG none would claim to be an expert on FRG and therefore the group relied heavily on what they were told. Thus the ideas, information and views received by the group were defined by the particular select and short programme of visits (set out in Appendix H to this report). The report is presented acknowledging the limitations in such a process.

This report has been written in such a way as to try to minimise detailed structural descriptions of the institutions and systems in FRG. Readers unfamiliar with the system in FRG may therefore like to read Appendix A to this report before embarking on the main text. A full glossary of terms and abbreviations is contained in Appendix F.

The party presents this report and its recommendations for consideration and gratefully acknowledges the immense assistance and generous hospitality of the host institutions in the Federal Republic of Germany. The report does not necessarily represent the views of any of the institutions mentioned above, or the institutions from which the party was drawn.

PREFACE TO REVISED EDITION

Since this report was made a lot has happened to vocational education in the UK and this project has continued to make other detailed studies of the FRG. This revised edition of the report has been produced as a consequence. The original texts and recommendations are left substantially as they were with only minor corrections. The Appendices, Notes and Bibliography have all been updated to take account of the new situation.

Russ Russell
July 1983

I INTRODUCTION

1 The systems of vocational education and training of the Federal Republic of Germany - FRG - are effective and comprehensive and, while built on laws passed in the last 32 years, are rooted in much older traditions and a broad social support for systematic training. In the Federal Republic the systemsof vocational education and training and the attitudes that support them have brought about a situation where the majority are systematically trained and this is often seen as the basis of the Wirtschaftswunder (Economic Miracle) of the post war era. In the United Kingdom - UK - such systems are respected.

2 Development, refinement and expansion have been the keynotes of vocational education and training in FRG in the seventies. Now, at a time where the 'bulge in the birth rate' is at its maximum in terms of school leavers, the proportion of young people aged 16 who receive systematic education or training in FRG is at its highest (over 92%)[1*] as part both of a conscious 'stock-piling' of skilled labour for the future and also as a proper social policy towards the young. In the United Kingdom vocational training in the seventies was innovative and effective but not characterised by expansion. The Manpower Services Commission - MSC - has called for a New Training Initiative[2] and the Government is responding. At such a time it is sensible to look at other vocational training systems, without implying that they are always and necessarily better, to see what we can learn.

3 The basic organisational structures that support initial training in the FRG would be difficult to replicate in the UK (nor should we try) but the attitudes that inform those structures may be more easily transferable. Most young people leaving school at the minimum age in FRG enter the 'Dual System'. That is they have a learning-contract or apprenticeship with an employer for a two or three-year period. They receive day release to obtain relevant further education in local colleges and, as the other part of the Dual System, they receive systematic training to nationally defined standards for their trade. All such contracts must be to one of the 460 or so nationally defined trades and the whole system is supervised by the local Chambers of Industry, Commerce or Crafts with whom all employers must register as traders. This system is further described in Appendix A to this report (readers unfamiliar with the system may prefer to read this before embarking on the main text) and also in Section II of this report. It is this voluntary system that has been expanding.

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*All Notes are gathered into Appendix E to this report

4 Within this Dual System a major experiment has been taking place. About 250 of the largest trades have been clustered together into 13 Berufsfelder (vocational fields) and for each Berufsfeld a common pattern of first year training has been defined. Efforts have been made, in this voluntary system, to encourage young people and employers to use this new Berufsgrundbildungsjahr (Vocational Foundation Year) in preference to the older established first year of the Dual System.

5 The objectives of the Berufsgrundbildungsjahr - BGJ - are to enable the young person to

a. identify, understand and evaluate the general relationships between work, the economy and society and his own position in working life and society;

b. make a more informed decision on career choice;

c. be occupationally mobile;

d. be equipped to meet the specific demands of vocational training.

Not all are convinced of the value of the BGJ in achieving these.

6 The Berufsgrundbildungsjahr has been designed to act as an alternative to the first year of traditional apprenticeship in the Dual System. It is available in two forms:

a. the 'Schulische' form - (College based)[3] in which both the educational and training components of the Dual System provision are provided in a Berufsschule (Vocational College):

b. the 'Kooperative' form - (Co-operative form) using, as in normal Dual System apprenticeships, Berufsschulen for the educational components and either a company or a group training centre for the industrial training components.

7 Within the systems of the FRG the politics of change are difficult because of the complexity of agencies in the field. While the system is voluntary in terms of participation, participation brings on certain regulations which then have the effect of civil law. In the UK a similar effect occurs when there are training boards, otherwise the system is much more voluntary.

8 Within the call for a New Training Initiative - NTI - the MSC has called for a systematic preparation for working life for all, as well as the maintenance and modernisation of a skill training system. There are such obvious parallels between these two parts of the NTI on the one hand and the BGJ and Dual System on the other that a study of the BGJ at this time seems likely to be fruitful.

9 This report is the report of a visiting party to the Federal Republic of Germany undertaken to look at the BGJ in relationship to the NTI.[4] To give the report some focus the visiting party and the visits were selected to allow one Berufsfeld in particular to be looked at (Berufsfeld Metalltechnik : Metal Trades). The names of the visiting party and the process of writing and the visits undertaken are detailed in Appendices G and H. The report is offered for consideration acknowledging the limitations of such a process.

II THE INSTITUTIONAL INTERFACES AFFECTING THE BERUFSGRUNDBILDUNGSJAHR

10 The Grundgesetz (Basic Law - or Constitution) of the Federal Republic reserves responsibility for education wholly to the eleven Länder (states) of the Republic and the Bund (Federal Authorities) has little legal authority for education. Nevertheless there has to be some co-ordination and compatibility of school systems and qualifications. This is organised by the Kultusministerkonferenz - KMK - (Standing Conference of the Educational Ministers of the Länder) an organisation that has a large secretariat and which has concluded many hundreds of agreements.

11 Each Land of the Federal Republic has strong central control of education from its Kultusministerium (Ministry of Education) and educational innovations tend to be centrally determined. When, as in the case of the Berufsgrundbildungsjahr, the decision is made at KMK or Bund level, it is easy to imagine that the system would lead to complete and easy implementation. It is not until one considers the system of relationship between the many central agencies concerned in the Federal Republic that it becomes possible to determine the areas of most vigorous debate. As can be expected, the implementation of such a development is fraught with problems and yet it is difficult to imagine that the introduction of a similar programme in the UK would in fact engender similar problems. This section of the report attempts to define the institutional interfaces and the areas of conflict of interest and to analyse the various attitudes that have developed in the Federal Republic concerning the BGJ.

12 On the other hand vocational training is the responsibility of the Bund. The responsibility for defining training regulations is now in effect carried out by the Bundesinstitut für Berufsbildung (Federal Institute for Vocational Education). The Bundesministerium für Bildung und Wissenschaft (Federal Ministry of Education and Science) takes an active interest in vocational education.

13 There is thus a delicate balance between the Federal Authorities on the one hand and the Länder on the other. Particularly since the passing of the Berufsbildungsgesetz (Vocational Training Act) by the Federal Government in 1969, vocational education has been a hot potato passed between the Länder and Federal Governments. The comparatively recent battle between Bayern and the Bund (which culminated in the declaration of the Federal Ausbildungsplatzförderungsgesetz - Training Place Promotion Act - of 1976 as unconstitutional) illustrates the tenacity with which the Länder defend their educational autonomy against

invasion from 'external' influences. A further complication is the political balance within the Federal and respective Länder governments. This is reflected in relative enthusiasm for the 'Schulische' or 'Kooperative' forms of the BGJ, with the SPD[6] Länder favouring the former and the CDU Länder the latter form.

14 It says much therefore for the degree of co-operation between the Länder and the Bund that there has been a constant development in vocational education. This would not have been possible without the existence of the influential and well-organised Kultusministerkonferenz (and its standing sub-committees) to express a co-ordinated opinion. In regard to the BGJ developments the Sub-Committee of the KMK for Vocational Education is important. Members of that committee frankly agree that many aspects of the BGJ are a compromise (for example the definition of 13 'fields'). They are unanimous though that the basic objectives remain:

a. the reform of apprenticeship;
b. to provide continuing education;
c. to provide a sound basis for adaptation and change and necessary retraining.

Nevertheless they state that there is disagreement about the balance between these objectives.

PROBLEMS

15 The main problems of the whole system (including the BGJ) are still:

a. the need for skilled workers;
b. the need for young people to obtain qualifications;
c. the need for an awareness of the relevance of school activity to the world of work.

In the Federal Republic 29% of all workers have no formal qualifications. This situation is eased by the very high percentage of young people who enter training. The situation though is not eased by the fact that there is still no full co-ordination between vocational training provision and the labour market, and that no comprehensive action is being taken regarding further developments.

16 At present the Federal Republic is faced with two main problems in the education of its young people aged 14-19:

a. There is an increase in youth unemployment. This will be cancelled out to some extent by a rapid decline in the number of young people coming forward to the labour market.

b. There is a growing influx of young foreigners who, although technically competing for training places, are frequently deficient in skills with the German language and other skills.

It should be remembered in comparing the training system of the Federal Republic with that of the UK that there is a compulsory military service for young men aged 18-20 which creates a three year gap between the end of compulsory school and the commencement of military service. This probably increases the propensity to use the period 15-18 for training.

17 Many young people who are low achievers leave compulsory school ill-prepared for training or to select a vocation. Throughout the Federal Republic one-year full-time provision is available for such people, and this is usually known as the Berufsvorbereitungsjahr (preparatory vocational training year). In practice these provisions are often being used mainly by the children of Gastarbeiter (foreign workers). These measures exist in part to defend the entry standards of the Dual System in a context in which there is great political pressure to expand the Dual System. Employers in the Federal Republic have a long history of commitment to the Dual System. The OECD Report of 1973[7] commented upon the reluctance of employers and trainers to accept change in the structure of what they regard as a proved system of industrial training, which is in part responsible for the post war 'economic miracle'. This attitude is relevant when one considers the preference many companies express for the 'Kooperative' form of the BGJ. The visiting party also received many comments regarding the greater similarity between the 'Kooperative' form of the BGJ and the Dual System than between the 'Schulische' form and the Dual System.

THE CHAMBERS OF INDUSTRY COMMERCE AND CRAFTS

18 All employers must register with an appropriate Chamber; either an Industrie-und Handelskammer (Chamber of Industry and Commerce) or a Handwerkskammer (Chamber of Crafts). All training contracts must be registered with the Chamber, which is eventually responsible for testing the trainee at the end of the contract. The influence of the Chamber has no parallel in the UK and it is difficult to envisage the creation of such bodies. Individually, at Land level and as a lobby at Government level it could appear that they have almost complete control of vocational training in FRG. They are the major contributors of funds, they receive the end product of the training and therefore consider it right and proper that they should have the largest voice. It was from some of the employers (and in some of the chambers) that the visiting party met opposition to the introduction of the BGJ. A variety of reasons were expressed, some of which can be attributed to a reluctance to change; i.e. an adherence to the Dual System, a suspicion of the motives of the Trade Unions. This latter criticism was also levelled at the Berufsschule teachers. Also added was the comment that *"we known best what we want"*, in relation to the balance between the theory and practice provided in the BGJ.8

19 Mention should also be made of the involvement of the larger companies in the development of vocational training. Their representatives are frequently members of the Vocational

Training Committees of the Chambers. They are in a position to lobby Länder governments, particularly those with nationwide interests. Daimler-Benz, for example favours the 'Kooperative' form of BGJ and has rationalised its training system with a nationwide syllabus for the training side of the BGJ. The in-firm training and development of their 'Meisters' (Master Craftsmen) includes a wide range of pedagogics and development in social skill training. Underlying the discussions with the chambers and representatives of industry was the feeling that the BGJ was an educational innovation which had no significant place in Vocational Training. The Dual System had proved its worth in producing skilled personnel, so why replace part of it? The argument for mobility had little validity within the Chambers. In spite of what some might consider a reactionary attitude, tribute must be paid to the involvement of the Chambers in all aspects of training, as providers of places, participants in curriculum, examinations and the maintenance of standards.

THE TRADE UNIONS

20 The Trade Unions see the main objectives of the BGJ as:

a. an increase in the provision of general education for all

b. an opportunity for young people better to determine their choice of trade.

Initially they preferred the 'Schulische' form because of the possibility of an extended general education content which would include German, Mathematics, Chemistry, Physics, Labour-Law and Civics. It is difficult if not impossible for the TUs to influence the curriculum of the BGJ in the 'Schulische' form because of the strong tradition in most Länder of central control from the Kultusministerium. This applies particularly to the general education area. For these reasons the Metal Workers Union has appeared to shift its position to one of support for the 'Kooperative' form in an attempt to gain influence. At all events the Union appears to take an ambivalent view of the issue.

21 Theoretically there is discussion upon practical content at plant level but the employers dominate the discussions and all the union can do is agree. It is apparent that in the larger enterprises pressure can be applied via works councils or the young people's council, but there are wider areas of concern with regard to apprenticeship and training places. For example, an attempt was made to negotiate training places with the MacDonald chain which resulted in the dismissal of the applicants. Whilst these young people may have recourse to pressure on the Chambers and to the courts, many are unwilling to take action. In the view of the Trade Unions the law against such abuse does not have sufficient teeth.

22 It is apparent that the Unions are deeply concerned with the provision of training and have commissioned research themselves with the Bundesinstitut für Berufsbildung - BIBB - into the

possible revision of the thirteen Berufsfelder into a division by skill rather than material. (See also paragraph 25) Unfortunately this research is not yet complete. Some union officials expressed the concern that in spite of the levels of interest and co-operation expressed relations between Unions and Ministries (Länder and Bund) are limited to discussions, with insufficient co-determination and no influence in implementation.

III THE STRUCTURE OF THE BERUFSGRUNDBILDUNGSJAHR

23. The Berufsgrundbildungsjahr has been designed to act as an alternative to the first year of traditional apprenticeship in the Dual System, and to exist as a parallel development. By agreement between Bund, Länder and industrial authorities it is available in two forms:

a. 'Schulische' form - (College based) in which both the educational and training components of the Dual System provision are provided in a 'Berufsschule'.

b. 'Kooperative' form - (Co-operative form) using, as in normal Dual System apprenticeships, Berufsschule for the educational components and either a company or a group training centre for the industrial training components.

24 There has been agreement to provide for 13 basic Berufsfelder (vocational fields) and these are given in Table 1 overleaf. Each of these Berufsfelder encompasses the educational and the training requirements of a cluster of the defined trades associated with modern industrial and commercial practices. Of the 460 or so legally-defined apprenticeable-trades in the Federal Republic, 250 have been grouped into one of the Berufsfelder. The remaining trades together only contribute a tiny minority of all apprenticeships provided and are either of a highly specialised nature or include many old trades where little has changed in terms of product or skill requirements (e.g. violin maker). Agreement has been reached on the outline syllabuses for each of these Berufsfelder (see also paragraph 42) and *satisfactory completion of the BGJ will be recognised as granting exemption from the first year of apprenticeship* (see also paragraph 32).

25 The 13 Berufsfelder have not been determined on the basis of a careful analysis of tool skills or operations with the subsequent assembly of like skills into generic clusters. On the contrary the dynamics of the arena of vocational educational politics demanded that the areas be assembled with what may be regarded as undue haste. Consequently traditional views on methods of grouping by raw material or industrial classification by product have substantially influenced the outcome. The very fact that the existing provision was highly compartmentalised in accordance with traditional thinking would have made it very hard to implement a more radical approach based on skill analysis to build new generic categories. (See also paragraphs 22 and 42)

TABLE 1 : BGJ - VOCATIONAL AREAS AND SUB-DIVISIONS

I WIRTSCHAFT UND VERWALTUNG - Business and Administration

a. ABSATZWIRTSCHAFT UND KUNDENBERATUNG
Marketing, Distribution, Servicing

b. BÜROWIRTSCHAFT UND KAUFMÄNNISCHE VERTWALTUNG
Office Management & Business Administration

c. RECHT UND ÖFFENTLICHE VERTWALTUNG
Law and Public Administration

II METALLTECHNIK - Metal Trades

a. FERTIGUNGS- UND SPANENDE BEARBEITUNGSTECHNIK
Production Engineering and Machining

b. INSTALLATIONS- UND METALLBAUTECHNIK
Fitting and Metal Construction

c. KRAFTFAHRZEUGTECHNIK
Motor Vehicle Engineering

III ELEKTROTECHNIK - Electrical Trades

IV BAUTECHNIK - Construction Trades (Trowel Trades & Concrete)

V HOLZTECHNIK - Woodworking Trades (Carpentry, Joinery, Wood Machinists)

VI TEXTILTECHNIK UND BEKLEIDUNG - Textiles and Garments

VII CHEMIE, PHYSIK UND BIOLOGIE - Laboratory and Science Based Process Work

a. Laboratoriumstechnik - Laboratory Technology
b. Produktionstechnik - Production Technology

VIII DRUCKTECHNIK - Printing Technology

a. DRUCKVORLAGEN- UND DRUCKFORMENHERSTELLUNG
Composition Patterns and Printing Blocks

b. DRUCK UND DRUCKVERARBEITUNG-BUCHBINDEREI
Printing and Bookbinding

IX FARBTECHNIK UND RAUMGESTALTUNG - Painting and Decorating

X GESUNDHEIT - Health

XI KÖRPERPFLEGE - Hairdressing and Beauty Therapy

XII ERNÄHRUNG UND HAUSWIRTSCHAFT - Food and Domestic Science

a. Catering and Domestic Work
b. Food Processing
c. Butchery

XIII AGRARWIRTSCHAFT - Agriculture

a. Animal Husbandry
b. Crops

26 The Industrial Training Boards in the United Kingdom, set up after the 1964 Act, were based on 'industry' defined by product or material. As a result the City & Guilds of London Institute and other curriculum and examination bodies have to some extent been constrained in efforts to develop schemes based on skills grouping. However, in the present climate of debate the visiting party remains optimistic therefore that (in part also because of work proceeding in C & GLI, the Manpower Services Commission and the FEU) any comparable approach to generic first year training in the UK would achieve a skill-analysis-based grouping more easily.

27 However, although Berufsfelder owe less to logic and educational research than they do to political pragmatism and expediency, most of the Berufsfelder stood up well, in the opinion of the visiting party, in terms of relevance for the young participants, appropriateness of curriculum, and in providing the young participants with a satisfactory foundation of tool skills. The least satisfactory Berufsfeld in these respects was that of Wirtschaft und Verwaltung (Business and Administration), where in spite of its division into three discrete areas (Sales and Servicing the Public; Office Administration; Law and Public Administration) there were clearly problems in its suitability for use with a very large and very diverse population. The variation in age of entry and ability levels of trainee bank clerks and trainee office helpers is but one example of this.

28 In the United Kingdom a wide range of employment has little in the way of widely-accepted education or training, and as a consequence what might be a suitable vocational education is little researched for these employments. As a consequence the proposals made in 1976 for 'Unified Vocational Preparation' - UVP - were in part based on the assumption that young people not receiving further education or systematic training as part of their employment contract would not be engaged in work of a multi-skills nature and would in general be from the non-certificated part of the school-leaving population. Even taking into account the effect of high youth unemployment on the relationship between inherent ability and job and work skill requirements, the 1976 assumptions now look naive in this respect. UVP schemes for clerical workers, travel agency counter-staff and some categories of retail distribution workers have in many cases been redrafted and upgraded when a fuller understanding of the ability range of these participants and the varied nature of their job skills has been obtained. This wide range of poorly-researched employment never covered by ITBs or other traditions will probably require continuous revision if systematic one-year training for all is proposed.

29 According to Manfred Kaiser,[9] the BGJ is intended to provide a general occupational-training as well as human and political education. The training elements are designed to progress from the general to the specific (all BGJ-Berufsfeld-Metall participants undertake some bench fitting before proceeding to the specialist fitting in toolroom work or welded fabrication or motor vehicle units). Not surprisingly many training

workshops in industry (e.g. Bloom und Voss in Hamburg) have had to base their timetabling strategy for all training places on the number of bench vices available and it becomes clear that shortages of specific equipment, not previously used greatly, may lead to bottle-necks and out-of-sequence training in the first part of the BGJ.

30 Manfred Kaiser claims that the BGJ allows for:

a. room for manoeuvre prior to selection of a specific occupation within the Berufsfeld selected;

b. an initial taster experience to be obtained;

c. a streamlining in the presentation of basic content to take place;

d. the broad occupational base necessary for potential advancement to higher qualifications (or for transfer to other occupations) to be provided;

e. the participants to enjoy more flexibility in the work situation and enhance their opportunity to change jobs.

It is also claimed by supporters of the 'Schulische' form that that form is particularly suitable for 'non-committed' leavers of first stage secondary school, for slow learners, and for those leavers who are regarded as too immature to benefit from an early exposure to the world of work.

31 There are increasing attempts to make the BGJ in the 'Schulische' form in effect compulsory. The Bundespost (Post Office) now regards it as the normal method of entry for young people. By agreement with the appropriate Chambers some Länder have in effect made entry to Agriculture and Motor Vehicle work as normal through the BGJ in the 'Schulische' form.

RECOGNITION

32 The training regulations of the Federal Republic have been altered in such a way that *a satisfactory completion of the BGJ will exempt the young person from the first year of apprenticeship in the normal Dual System* provided that the specialist apprenticeship is recognised as being within the Berufsfeld of the BGJ. Six months remission of time is made available for those moving to a related area or those entering into a training contract for some of the less demanding and consequently shorter apprenticeships. It is reported that a fairly widespread practice is for some employers to avoid this requirement by recruiting BGJ participants just before they complete the BGJ in the 'Schulische' form, and thus legally require them to complete the normal length of apprenticeship. On the part of many employers, there is a low regard, or at least uncertainty, on the value of the BGJ in the 'Schulische' form. Many seem to regard it as an acceptable form of completion of general education (i.e. as a 'tenth year' of compulsory school),

and a good orientation and diagnostic period but remain uncertain of it as always shortening specialist training.

33 It is difficult to relate all this to British attitudes. UK employers would in general welcome a reduced financial commitment to training and it is the British Trade Unions who have proved in the past to be somewhat reluctant to accept remission of apprenticeship time by virtue of completion of vocational preparation programmes. Their attitude to systematic YTS schemes remains untested. It may be that success in FRG is because many employers take advantage of low apprenticeship wage rates and 'training time' in the second and third years in effect to reduce apprenticeship costs.

34 So far as pre-apprenticeship courses in the UK were concerned the Raising of the School Leaving Age - ROSLA - in 1973 threw out the baby with the bath water and we can only regret that ROSLA was implemented with such politically directed haste that the last things to be considered were the views, needs and aspirations of the recipients. The ill-fated Engineering Industry Training Board Information Paper No.49[10] attempted reincarnation of the possibilities of ROSLA, but history shows that a single-handed dash from the ranks is not the way to win battles. Now the UK is with a more voluntaristic system than ever with fewer ITBs, or organisation to aggregate opinion or influence implementation.

35 The development of BGJ must be related to other developments in the structure of vocational training in FRG. Three related areas are:

a. in a number of Länder there is a general politically-oriented drift from Hauptschule (Secondary Modern) provision to Realschule (Technical School) and Gesamtschule (Comprehensive) provision. Thus Realschule and Gesamtschule becomes a more usual recruiting ground for the Dual System (See Appendix A, paragraph A3)

b. there is a growth of full-time provision 15-18 in the Berufsfachschule (Full-time Vocational School); often recruiting from the Realschule

c. the 'academic drift' tendencies, particularly in Realschule or with lower-middle-class parents, have a danger of leaving the BGJ in the 'Schulische' form as a 'rump' provision for those who fail to achieve Berufsfachschule, or apprenticeship with the more highly regarded employers/trainers.

36 Again, parallels with the UK can be drawn, but comparisons are difficult. It is the case that caring working-class parents in the UK tend to support Local Education Authority - LEA - means-tested-bursary programmes in full-time non-advanced further-education in preference to exposing their children to the uncertainties that arise at the end of the Department of Employment/MSC funded schemes for the young unemployed on Youth Opportunity Programmes. Not a true parallel with the

FRG, but still interesting. How people will react to the NTI is not certain.

37 Employers and employers' organisations in the Federal Republic frequently made comment to the visiting party concerning the inadequacies of the BGJ in the 'Schulische' form with respect to the amount of time available per day and per session compared with time available within the BGJ in the 'Kooperative' form. The time elements in the latter are similar to those used in the normal industrial day and contribute to work-skills aspects of the curriculum. This cannot be denied. However, one is reminded of similar arguments with relation to industry-based and college-based versions of EITB approved training and that both forms reach the necessary level of job specific skills.

38 Much time and energy can be dissipated by interested parties arguing the various merits of a 'Schulische' form to a 'Kooperative' form. It goes without saying that supporters of one form rarely find anything to warrant survival of the other form. It seems likely that both forms are needed to provide for different aims and client groups. The advantages seem to be:

a. <u>For the 'Schulische' form</u>

i. the school base allows for a reasonably smooth transition from Berufsschule-based preparation courses (BVJ) for non-German speakers, or slow learners, onto the BGJ;

ii. it allows a 'stepped' transition from the Secondary School classroom of the compulsory school to a real work situation;

iii. means-tested Land grants with a maximum of 70% of appropriate first year apprenticeship rates;

iv. motivation to learn: the 'Schulische' form encourages pupils to continue in full-time education to improve on school qualifications - or even continue to Berufsfachschule;

v. readily available opportunities for balancing studies, counselling and remedial studies.

b. <u>For the 'Kooperative' form</u>

i. trainees have already entered into a training contract and will be supported in their position by a sense of security;

ii. trainees will progress smoothly from the BGJ into a guaranteed company based traineeship with the contract already signed;

iii. normal first year apprenticeship wages;

iv. works discipline and work hours contributing to acquisition of work skills.

IV ASPECTS OF CURRICULUM AND TEACHING

39 It has already been explained that the BGJ is provided in 13 separate Berufsfelder. These are listed in Table 1, page 14. Not all are happy with this limitation to only 13 fields, because of the necessary wide spread of apprenticeable trades included. For instance, in the field of 'Metall' there are 77 different trades from welding (heavy plate) for the ship building industry to car mechanics. There are, of course, for each of these 77 trades separate training regulations which have the force of civil law since the employer makes a contract with the apprentice to train satisfactorily the apprentice in the agreed trade within the agreed time. The BGJ necessarily reduces the specialist time available by one year, because of the accreditation recognised by the nationally agreed regulations (See also paragraphs 24 and 32).

40 Nevertheless the BGJ, in either form, has to:

a. give a broad-based training to enable the trainees to make a more informed choice of ultimate trade and to increase their mobility within the vocational field;

b. to enable the successful trainees to enter the second year of the Dual System on equal terms with their colleagues who entered the Dual System at the beginning of the first year of their apprenticeship.

These two aims are not necessarily compatible. In comparing the BGJ with YOP courses, or certain versions of the New Training Initiative - NTI - proposal, it must be remembered that the BGJ is a preparation for considerable, legally-defined, further training, whereas in many proposals in the UK 'Vocational Preparation' is primarily a preparation for work. Only a minority go from Vocational Preparation to further education or systematic training, and without any 'credit relief'.

41 The Berufsfelder appear to have been chosen to produce rather arbitrary 'industrial' or 'material' groupings of trades and the initial classifications were regarded as unsatisfactory. As a result, decisions within the field have been introduced that in effect create 22 sub-fields rather than 13 Berufsfelder (see also Table 1, page 14). In Metalltechnik there are three sub-divisions, each of which encompasses a range of trades. The third group is given here in full as an example:

TABLE II

a. FERTIGUNGS- UND SPANENDE BEARBEITUNGSTECHNIK
Production Engineering and Machining

- 46 trades encompassed

b. INSTALLATIONS- UND METALLBAUTECHNIK
Fitting and Metal Construction

- 24 trades encompassed

c. KRAFTFAHRZEUGTECHNIK
Motor Vehicle Engineering

1. KAROSSERIEBAUER
Bodymaker, Coachbuilders
2. KRAFTFAHRZEUGELEKTRIKER
Motor Vehicle Electrician
3. KRAFTFAHRZEUGMECHANIKER
Motor Vehicle Mechanic
4. KRAFTFAHRZEUGSCHLOSSER (INSTANDSETZUNG)
Motor Vehicle Fitter (Maintenance)
5. LANDMASCHINENMECHANIKER
Mechanic for Agricultural Machinery
6. MECHANIKER (NÄHMASCHINEN-, ZWEIRADMECHANIKER) - ZWEIRADMECHANIKER
Mechanic (Sewing Machines, Bicycles, Motor Cycles)
7. VULCANISEUR
Vulcanizing Operator

42 At this point the character of the Dual System must be re-stated as consisting of training from an employer, and education from the Land Berufsschule. The training by the employer must be within the Ausbildungsordnungen (training regulations) laid down by the BIBB on behalf of the Bundesministerium für Wirtschaft (Federal Ministry of Economic Affairs), and there is a basic supervision of this by the Chamber with which the employer is registered. The Chamber will also set and administer the final examinations. The Ausbildungsordnungen though tend to be defined in terms of the *terminal* skills required. As a result employers embarking on the BGJ in the 'Kooperative' form, while they can call on the advisers from the Chamber, are fundamentally very much on their own in changing the training they give. This may lie behind the lack of enthusiasm for implementing a BGJ by the small employers. On the other hand, large firms, with large professional training departments, may feel very competent in this area. The educational components on the other hand will be within a Rahmenlehrplan (Outline Curriculum) agreed between the Länder to co-ordinate with training. Rahmenlehrpläne

exist for all 13 Berufsfelder and are published by the Kultusministerkonferenz, and thus strong co-ordination exists in these areas of the 'education' for BGJ.

43 There are three main components of the Rahmenlehrplan:

a. Technical Theory subjects

b. General Education subjects

c. Practical Work

The allocation of Stunden (teaching sessions : 50 minute hours) recommended for the Berufsfeld Metall is as follows:

Technical Theory Subjects	Technical Theory	120	320
	Physics/Chemistry	40	
	Technical Drawing	80	
	Maths & Calculations	80	
General Education Subjects	German	80	320
	English	80	
	Economics/Social Science/Law etc.	80	
	Sport	80	
			640

The rest of the time available is spent on Practical Work in both forms. The amount of time in the 'Schulische' form varies according to the length of the Berufsschule day, and the length of session (usually 40 weeks). Critics of the 'Schulische' form sometimes estimate this as low as 540 hours, while it is officially as high as 720 Stunden. In all cases it compares poorly with the 'Kooperative' form of nearly 1100 hours. In addition, the quality of this training in-firm does vary. In the larger firms the first year apprentices may spend nearly all of their time in special training shops while the smaller employer, particularly in the Handwerks area, may have them in production 'sitting by Nellie'.

44 It is evident that the distinction between vocational education and training is in practice as imprecise in FRG as it is in the UK. A considerable amount of what we might call 'Craft Theory' is often taught in factory Ausbildungszentren (training centres) before any practical work is started. This is often repeated in the Berufsschule. It is difficult for an outsider to assess how widespread this practice is. It does of course have the effect of minimising the difference between the 'Schulische' form and the 'Kooperative' form of the BGJ. In practice both forms give specialist training from about two-thirds of the way through the first year.

45 The Rahmenlehrpläne are invariably turned into detailed syllabuses with support materials or notes within each individual Land. In the smaller 'city' Länder such as Hamburg, Bremen or Berlin this is usually done by inter-college

committees drawn from the several colleges concerned. Larger Länder usually have central curricular agencies to work on the materials, this may create dissemination problems. This process of detailing at Land level does of course work against co-ordination within the Federal Republic.

46 It was frequently stated, particularly in the Berufsschule, that there were many contacts between Berufsschule teachers and trainers from the firms. They certainly meet in the examination committees of the Chambers where students are finally assessed. It is difficult to assess the effectiveness of these and other contacts. The visiting party were unclear about the extent of co-ordination that could result. The party felt that the distant production of Rahmenlehrpläne and Ausbildungsordnungen at the centre was not necessarily co-ordinated well and was uncertain if local co-ordination could bring the two together.

TEACHING APPROACHES

47 In all the learning situations visited, teachers and apprentices seemed to have a very easy relationship with one another, although some disciplinary problems were reported. In the classroom fairly formal didactic teaching was common. In one Berufsschule the group was shown a classroom that had been designed and equipped to facilitate the integration of theory with practice, demonstration and investigation learning : although it was admitted that teaching staff generally either did not have the skills and/or confidence to move easily from teacher-centred learning in the classroom.

48 Workshop and practical sessions were more student-centred with well planned projects to encourage problem-solving and the application of theory and general principles. Projects in the Berufsschule are chosen at that level and may be used to overcome the limitations implicit in parallel projects at work, or narrow training in the smaller firms. Control over these projects seemed very loose. One such set-piece project was the construction of a small engineering vice. In Daimler Benz a major project for all apprentices in the Berufsfeld Metall was the construction of a working steam engine. This latter project was common to all apprentices in the firm, including those in other plants in other Länder. Both projects were designed to develop and assess a wide range of basic skills in metal forming, cutting and assembly. The idea of each student selecting or designing a project seemed very foreign.

TEACHERS

49 The Berufsschule pedagogically trained teachers for technical subjects serve a five-year period in industry before starting professional teacher-training. During this training a student teacher will study a technical subject and a general subject. This enables the Berufsschule teachers to relate general education subjects to technical subjects. While this approach to pedagogic training reduces the distinction that is often made between the status of technical teachers and general

education teachers, teachers still had problems in motivating students in general education subjects. Many teachers said that their pre-service pedagogic training did not adequately prepare them for teaching low achievers and unmotivated BGJ students. In the places visited no special in-service training was being provided to help teachers cope with the problem, although it was reported that this took place in other Länder.

50 While teachers generally favoured the notion of the BGJ, it was intimated that many teachers expressed a preference for the Dual System apprentices. The inference drawn from this is that teachers prefer high ability and specialised students, and that classes for the BGJ in the 'Schulische' form were often drawn from young people who had failed to get apprenticeships - and were often less able. Nevertheless because all trained teachers are on the same single salary scale, teachers' promotion prospects were not affected by teaching students of low ability.

51 The supervision of apprentices in FRG must be undertaken by Meisters. The basic training of a Meister includes some elements of pedagogy. Nearly all supervision in firms is undertaken by qualified Meisters, and in the Berufsschule the workshop sessions are usually supervised by a fully trained teacher and by a Meister.[11]

52 The BGJ is seen to have a more traditional design base to its curriculum than Apprenticeship training, Foundation Courses or Vocational Preparation courses in the UK. It has, for example separate subjects for each curriculum component. For example, the general education component in BGJ has similar aims to General Studies in UK schemes: yet in FRG the component has four clearly defined subjects, while in UK it is more broad based. In the technical theory subjects there has been a trend in the UK to integrate subjects so that maths, physics and chemistry might be subsumed into relevant topics in an effort to disperse the three disciplines and increase student motivation by relevant use of theory. There seems to be less of a trend in FRG to do this. Two reasons for this seemed clear. Firstly the Berufsschulen are very monotechnic in character, while the UK colleges tend to be multi-technic. Secondly, the compulsory pedagogic training which requires the study of general subjects by the technical teachers allows the teachers to introduce these ideas in a more general way without curriculum redesign. Consequently relevance and integration are achieved in the classroom. The aims are common between UK and FRG teachers but the process of implementation is different.

SOCIAL SUPPORT OF TRAINING

53 There seems also to be a greater emphasis in BGJ on continuing general education than is usual in comparable UK courses. To the visiting party it seemed that success with the 'Schulische' form of BGJ may depend on the universal implementation of a tenth compulsory year of schooling. If the BGJ in the

'Schulische' form is accepted as an alternative to continuing general education and is still recognised as a year of apprenticeship its future is assured. There are a number of reasons why the Dual System, training and the BGJ are so highly valued:

a. there is in FRG a great emphasis on the acquisition of skills and skilled status;

b. it is widely believed by all sections of the community that training actively reduces the chances of unemployment;

c. skilled status leads to higher pay, better work conditions and better conditions of service;

d. in many activities it is not possible to set up business in any trade without holding a 'Meister' (Master) status which can only be achieved after practice as a Facharbeiter (Skilled Worker).

54 There is a considerable misgiving, certainly in industry, about the desirability of raising the school leaving age, particularly for those who are (or are seen as) practically inclined and for those who are Schulmüde (School-tired). It is said that if the tenth year of schooling becomes mandatory then the BGJ in the 'Schulische' form should be given preference (compulsory recognition for a full year would still be a problem). Such a proposition would meet resistance in the UK if such a scheme were introduced into the final year of schooling (15-16). EITB Information Paper No.49 caused considerable controversy on this subject a few years ago. However, whether in school or college, vocational courses leading to examinations of TEC, BEC and C & GLI are proving to be a success, even with those young people who are initially reluctant returners. It should also be noted in this context that apprentices now frequently use both the BGJ and the first year of the Dual System in the Berufsschule to gain a recognition of upgrading the quality of certificate with which they leave Hauptschule.

FURTHER DISCUSSION

55 A dissatisfaction with the 'Schulische' form expressed by industry was the method of assessment used. It was suggested that the Berufsschulen were less objective than industry. Industry makes greater use of nationally devised and designed tests from central agencies, often in objective form, whereas in the Berufsschule the teachers made greater use of assessment on a six point scale. It was suggested by industry that the value of a grade awarded depended as much on the overall performance of the peer group as on the individual student. Some systematic educational research has been conducted on both forms based on Salzgitter. The research appeared to show that students from the 'Schulische' form are better than students from the 'Kooperative' form in theory studies, no worse in practical tests in which they have a better approach to the planning of tasks although they were somewhat slower in their execution. Some industrialists dismiss these experiments

partly with their own experience, and also pointing out that *"no educational pilot scheme has ever been known to fail"* but transferability to a universal situation is more problematic.

56 A consistent complaint of the employers was the lack of understanding of the work situation from those BGJ students from the 'Schulische' form. *"Working-together"* was certainly a very important part of the training seen in the large companies visited, and the ability to decide on one's own rate of learning was also seen as desirable. It was obvious that great importance was attached to socialisation within industry.

57 The visiting group found very little difference between the 'Kooperative' form of BGJ and the existing Dual System which bears a close resemblance to the apprenticeship system in the UK when supported by day-release (this similarity may only exist in certain trades, such as the ones studied in FRG). The one major difference was the second day spent in Berufsschule in the first year and the greater amount of time spent on general education. Even so it was stated that an apprentice would not be failed overall for failure in these areas in the Berufsschule. A change of trade is possible in the Dual System if both partners agree to a new training contract (this implies the chosen trade is one available in the company). It is difficult to see how this choice is widened by the 'Kooperative' form of the BGJ since the same restrictions apply.

58 The apprenticeship system covers a larger number of jobs, or job areas, than in the United Kingdom. Many of the defined trades though are narrower. Some of the trades in the Berufsfeld Metall result in a craftsman specialised in a narrower range of skills than in the UK. Industry in FRG believes that this more 'in depth' training leads to greater flexibility which is contrary to the view held in the UK. The need for industrial training in dual skills (e.g. the mechanical craftsman with more than a passing knowledge of electrics and electronics) is not seen as such a requirement in FRG as it is in the UK). In as much as BGJ is successful and satisfactory to employers it is so because *it is an abstraction from an already existing legally recognised training and from that derives its recognition.* The degree of generalisation between trades runs in a counter direction to the satisfaction of the trainees' first employer. That tension is endemic to a process of abstraction. The difference in the UK is that there is so little recognised training from which exemptions may be gained that almost any foundation year will be 'acceptable': but that for many it will be preparation-for-work not foundation-for-training (see also paragraphs 24, 32 and 40).

V SOME COMMENTS ON BERUFSFELD METALLTECHNIK

59 Most of the visiting party were engineers and experienced teachers of engineering. Some had made study tours of the education and training system of the Federal Republic on previous occasions. This section of the report has been drafted in particular by those members of the group; recognising, of course, that it is relatively easy to examine workshops and colleges, talk to instructors and teachers over a short period and arrive at quite erroneous conclusions.

60 The philosophy of the BGJ in either form is that it will *provide a broad based foundation oriented to future mobility.* Upon examination particularly in the workshop practical activities, it bears a strong resemblance to the *first-year-off-the-job* training provided in the UK in both theoretical and practical subjects. It is in the context of what is considered *broad-based* that a possible source of error in comparison lies. The individual trades within the field of Metall, can be narrow, with what appears to be the production of skilled setter-operators for machine tools being the usual function of an apprenticeship. Coupled with the period of time served to attain Facharbeiter status (i.e. Draughtsman/woman - 2 years : Shaper, Fitter, Turner, Driller - 3-3½ years each) it becomes more difficult to compare EITB requirements for achieved standards to determine true equivalence. The UK system of final craft and advanced craft in the C&GLI system seems to go further than most FRG apprenticeships (not all in the UK go that far either) and has been very strongly influenced by the needs and good practices of the premier companies. It is not a coincidence that these programmes have all emphasised precision bench fitting and machining of a tool-room character.

61 The visiting party observed parallel positions in FRG. Some of the premier companies visited used their ability to recruit and their large overall recruitment in similar ways to select, re-orient and develop the best recruit. In welding, for example, one firm trained only a small minority in a full programme of oxyacetylene, electric arc, MIG, TIG, low hydrogen for quality work and multi-skills functions and a larger number for the larger-scale requirements of stick-welding. Another company selected small minority for training as high quality toolmakers leaving the remainder for plant maintenance fitters or as skilled setter-operators.[12] These practices are formalised if the firms operate a 'Kooperative' form of BGJ, but little is really altered. In essence they are common to industry in UK and FRG. The visiting party felt however that the skill level of the lower group was probably higher and more even and more guaranteed than in the UK.

62 The visiting party also noticed again the practice of large industry not necessarily training for skills it certainly employs (even in small numbers, such as motor mechanics, painters, decorators, carpenters, etc.). Presumably these are poached from 'Handwerk' which raises questions about the motivation for training in Handwerk enterprises. Nevertheless in general larger employers both expressed and seemed to act in terms of a feeling of overall social responsibility to provide, and continue to provide, training for young people and contribute to the overall pool of skill, and pool of opportunity in the Federal Republic. Here and there, nevertheless, with truly National and Multi-National companies the visiting party felt that firms stood a little aloof from local Chambers and Länder traditions or commitments. The group recognises the implicit contradition or paradoxes in these three impressions but wishes to record them.

63 The group felt that the programmes of the BGJ in Metalltechnik had been tightened up since last seen with more emphasis on time specification for tasks and the better design of projects and set-pieces to stimulate student interest. While true of industry it was more true of Berufsschulen. The group was also impressed with the working methods and materials (Leittexte) in both industry and Berufsschulen. These, not necessarily better than EITB materials, are locally produced.

64 Class sizes seemed to be lower on average in Berufsschulen than in the UK. Student motivation varied widely from genuine enthusiasm, to a commonsense *"I'd rather be learning a trade than not"* to *"It's all a bore, school, teachers, trainees, the lot"*. The recruitment of girls to traditional male trades seemed higher than in the UK. The Gewerbeförderungsanstalt of the Handwerkskammer of Düsseldorf was also impressive in its determination to provide apprenticeships for those who, while genuinely requiring them, failed to get them for a variety of disabling reasons, including those of being female or appearing over-qualified. The City of Hamburg also impressed with its provision for women and ethnic minorities.

65 There was also through the visit a determination displayed to provide a good basic and theory training with no frills. This was observed at a number of points. CNC Machine Tools appeared only in the third year of training and no earlier. The curricula seemed to systematically exclude for most craftsmen the subject of pneumatics, electro pneumatics, microprocessor programmed circuit-building, and fault finding. The notion of 'keyboard' skill seemed so alien as to be almost untranslatable. These were not present in BGJ (nor should they necessarily be there) but they seemed absent from second and third-year training, and few concepts of control, process or problem solving were being laid as foundations. These have been of greater concern in the UK. FRG seems content to leave them for 'further training'.

66 Berufsschulen and other educational buildings in FRG seemed generally better built than UK counterparts with high capital investment to reduce operational and maintenance costs in the

long term in comparison with the UK situation where we are now paying the penalty of skimping on building budgets in the immediate post-Robbins period. The group recognises the problem of evaluation that derives from being shown only the show pieces. In addition an excellent Überbetriebliche Ausbildungsstätten (Group Training Centre) was seen in Hamburg, provided as are all such centres by the employers and funded in part by the Bundesanstalt für Arbeit[13] (See also paragraph 74).

67 Training centre staff, with some exceptions, tended to be critical of the technical theory input of the Berufsschulen staff. As might be expected, the Berufsschulen staff felt that they had plenty of contacts through examining boards of the Chambers, informal contacts, Vocational Education advisory groups to Chambers and Länder etc. Nevertheless the group felt that the Berufsschulen staff could do more in terms of normal business contacts, slightly more formal visits, open days, seminars for employers and other *non-training senior staff*. Decades of compulsory day-release may have dulled the edge of urgency. It could be that the visiting party over-emphasised the need for co-ordination and harmony. The young people themselves seem little disturbed by it and welcome the overlap if it reinforces their grasp of the subject and are only critical if the delivery of material by one of the parties is patently weaker than the contribution made by the other or if it is delivered without thought being given to its relevance or otherwise to their situation.

VI THE TARGET GROUPS AND DEVELOPMENTS

68 The BGJ was conceptualised and introduced in the early 1970s, a period of optimism and buoyant expansion. In vision it was never intended to apply to any special or small group, but to be a pilot experiment for all the apprenticeable trades. In vision, and unvaryingly since, the objectives have been to provide for better and later career choice, and a broad training base for adaptability and flexibility *for all*. In practice, over nearly a decade, the project has proceeded slowly and rather unevenly.

The overall figures can be seen in the following two tables:

Table III - Development of intakes of pupils in the BGJ 1971/72 - 1979/80

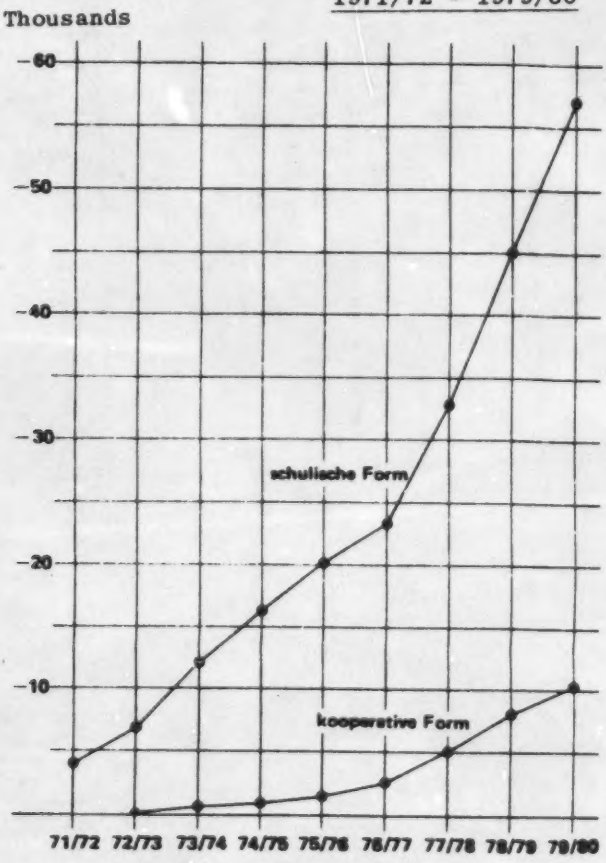


Table IV

	Number in First Year Training	BGJ Schulische Form	BGJ Kooperative Form
1975	411,100	20,136	1,410
1979	528,500	57,004	10,301
1980 Estimate		63,000	15,000

69 The distribution amongst the Länder in terms which reflect the relative enthusiasm can be seen in this table:

Table V

Number of pupils in the BGJ (school-form and co-operative form) in relation to the number of apprentices in the first training year.

Land	School-Year 1978/79			School-Year 1979/80		
	Apprentices[1]	BGJ	%	Apprentices[1]	BGJ	%
BW	70,754	3,890	5.7	73,649	5,370	7.7
BA	99,994	10,878	10.9	102,060	11,445	11.3
BE	11,858	1,421	12.0	11,466	1,578	13.8
BR	6,680	435	6.6	6,983	660	9.6
HA	13,692	1,692	12.8	13,931	1,794	13.3
HE	42,683	5,771	14.2	45,292	7,145	16.6
NS	58,841	10,531	17.9	55,923	17,746	31.7
NW	142,441	8,485	6.0	150,644	9,873	6.6
RP	33,073	6,624	21.3	34,092	7,197	22.7
SA	9,750	1,516	15.8	10,753	2,119	20.0
SH	22,375	1,750	7.8	23,742	2,378	10.3
BG	512,141	52,993	10.5	528,535	67,305	13.0

[1] Apprentices in the first year of training, including those in the co-operative BGJ. The unit of reference (100%), however, is the total number of apprentices minus those in the co-operative BGJ.

Furthermore, there are important variations by industrial sector. There were in 1979/1980 no Kooperative schemes in Berufsfelder I, V, VII, VIII, IX, X, XI, XII and XII. More than half of all such schemes were in Metalltechnik (53%) and most of the rest (37%) were in Bautechnik (Building). (See also Table I, page 14).

TRENDS

70 In order to interpret and place the developments of the BGJ, its target groups and future developments it is necessary to establish other background trends in the Federal Republic.

DEMOGRAPHIC PATTERNS

71 As for all countries in Western Europe, the birth rate peaked in 1964, and the number of 15-year-olds in 1980. The age of young people seeking apprenticeship varies from 15-to-19, so that the peak demands for places arise probably in September 1982. The vigorous campaign to increase training places made by the Kuratorium der Deutschen Wirtschaft[14] has more or less matched the demand. There are criticisms in FRG that too many places have been provided by Handwerk or in trades not necessarily likely to guarantee employment. There are certainly signs that the recession is hitting big industry who may restrict training places from September 1982 (reported in the daily press while the visit took place). The implication of all this is that because of competion for places without the provision of BGJ in the 'Schulische' form and BVJ, the rates of training in excess of 90% could not have been achieved.

72 However as the 15-year-old age group continues to drop very rapidly until beyond 1990 the excess demand for training places is likely to become a deficit, unless other influences (recession?) take over. It follows that employers are unlikely to be willing to extend the length of training period (which is undoubtedly one of the incidental results of the BGJ introduction in the 'Schulische' form). Development of the BGJ in the 'Schulische' form is therefore likely to be restricted to a modest increase, if at all, in the coming years.

UNEMPLOYMENT

73 The pressures on training places, the recession, and rising youth unemployment have deflected the BGJ (at least in the 'Schulische' form) from its original objectives to coping with unemployment. The 'Schulische' form of the BGJ is now being used consciously as a buffer forming a reservoir of trainable young people who have been unable to secure a training place in a company. Some of course will enter the second year of training; but clearly, with the awareness by the Länder authorities a steadily growing number of less-able youngsters are held off the labour and training market for 11 months with the reservoir effect. In situations where the 'Kooperative' form is preferred, this has a longer-term effect of diminishing the status of the 'Schulische' form. The BGJ in the 'Schulische' form then becomes confused in status with the Berufsvorbereitungsjahr (see also paragraph 17).

FUNDING

74 The status of the BGJ as a pilot scheme allows the Bund to make grants of up to 90% to cover plant, curriculum development

or staff training costs in the training firms, in ways which would be hotly contested by the Länder in other circumstances. Since direct funding of education and training is a rare activity for the BMBW it is not yet in over-vigorous competition with other activities for funds. Funds from the BFA for the establishment of Überbetriebliche Ausbildungsstätten[15] can also be used to encourage the development of the BGJ in the 'Kooperative' form. These two opportunities can be used in a steady spread of what is considered good practice for a number of years yet. Despite this, the 'Kooperative' form has not been growing as fast as the 'Schulische' form. It remains to be seen if the very expensive 'Schulische' form will continue to grow in the general pressure on finance of all publicly funded activities in Europe. All the costs of the 'Schulische' form are found by the Länder. Some, probably a minority of small employers though would be happy to see a growth of 'Schulische' form BGJ to shift the costs of first-year training from themselves.

EXTENSION OF COMPULSORY SCHOOL

75 There is pressure to extend compulsory schooling for a tenth year in all Länder, although there is as yet no agreement between the Länder. Some SPD Länder are proceeding and where, because of the political complexion of the local Land, the employers see this as inevitable in the long term they express the strong desire that the tenth extra year should be a 'Schulisches' BGJ, although doubts are still expressed about the compulsory recognition of the year as the full equivalent of a year in the Dual System.

76 On the other hand, the Trade Unions are in favour of an additional year of schooling. They would like to see the tenth year used for an extension of general education and of the Arbeitslehre programme,[16] which they would like extended to all schools. The unions do not present a wholly united front on the choice between the 'Schulische' forms and the 'Kooperative' forms. Most unions would like to see the BGJ 'Schulische' form compulsory but in recent years the Metal Workers' Union has changed its views and now prefers the 'Kooperative' form because, it believes, it can have a little more influence on the curriculum. The Berufsschulen, they report, exclude them. (See also paragraph 20)

77 The Deutscher Gewerkschaftsbund - DGB - (German Federation of Trade Unions) does not favour the Dual System for the first year which it believes restricts mobility. Nevertheless they recognise that young people may favour it because of the higher wages (these vary from trade to trade from 180 to 600 DM per month) than the means-tested grant available for the 'Schulische' form BGJ (240 DM). Also, of course, the young people, in times of uncertainty, are pleased to acquire an apprenticeship as early as possible. The DGB places great emphasis on general education (including political studies and employment law etc.) in tenth year, both in the BGJ and in the Dual System, and less on technical theory studies which are favoured by employers.

FLEXIBILITY

78 In the FRG there is an awareness that many skilled workers would need to change their trade at least once during their working life. One of the objectives of the BGJ is to equip young people, through a more general basic training, to cope with such changes, although that is not universally regarded as valid. Many believe that, if retraining becomes necessary in 20 years time, the best foundation in the present is to concentrate on training in a particular trade in greater depth, rather than the generality of a BGJ. Employers tend to regard the BGJ as not being sufficiently oriented to a particular trade and in the 'Kooperative' form it does not allow a greater flexibility than already exists in the firm. Further, the employers tend to recruit to their own specific manpower plan, in a 'Schulisches' BGJ the recruits will tend to pick a popular trade or one which the Land feels able to offer.

PARENTS

79 Despite the very substantial amount of literature available on the BGJ a general lack of interest is apparently displayed by young people and parents. Economic uncertainty or the continuing public emphasis on the importance of a sound 'preparation for working life' could stimulate this interest but it seems unlikely to have a significant influence.

VII CONCLUSIONS AND RECOMMENDATIONS FOR CONSIDERATION IN THE UNITED KINGDOM

80 The previous sections of this report seek to highlight the salient features of experiments in the first year of vocational education and training in the Federal Republic of Germany, and to assess the lessons to be learned from these experiments, especially in so far as they may offer significant pointers for the United Kingdom. This report was drawn up after the consultative period for the MSC's *'Proposals for a New Training Initiative'* was closed, and this was very much in the minds of members of the visiting party who were daily expecting the Government White Paper and the MSC's *'Agenda for Action'*.[17]

81 The visiting party is very conscious of the many differences in structure, culture and attitudes between the Federal Republic of Germany and the United Kingdom, and does not suggest that an attempt should be made to recreate the system in FRG, or indeed whole major sections of it, in this country. The visiting party was left, however, at the end of its short tour with two overriding impressions of the strength of the system in FRG, namely

a. that between 90% and 95% of young people in the 15-18 age range are either in full-time education or engaged in a full-time programme of vocational education and training leading to a recognised qualification and to the respect and fulfilment which result therefrom;

b. that the system has strong general support, notwithstanding differences of opinion about particular aspects of it, from employers, unions, the education service, young people and their parents and society as a whole.

82 The visiting party could not help but contrast this with the position in the United Kingdom, where despite many examples of established or innovatory good practice, a very substantial proportion of young people enjoy no similar opportunity or achievement after leaving school at the earliest possible age.

The visiting party has therefore drawn up a list of recommendations, which are set out overleaf. The visiting party recognises that a number of its recommendations involve new legislation or have substantial resource implications, but it believes these to be necessary in the long term interest of this country and its young people. What the party hopes above all is to help to bring about a change of attitudes in the United Kingdom, whereby vocational education and training will be more widely and more highly valued than they are at present.

RECOMMENDATIONS

83 *Therefore in the light of their experiences in the Federal Republic of Germany, the visiting party requests that active consideration be given by the appropriate authorities in the United Kingdom to the following administrative or legislative developments, drawing on experience from the Federal Republic where this is relevant:*

a. The Government should devise machinery for the establishment of a comprehensive, co-ordinated and coherent system of education and training for the 16-19 age range.

b. All young people in this age-range not undertaking courses of full-time education should have *access* to programmes of education and training and be actively encouraged to participate therein. The initial programmes should be broad based so as to provide a foundation for further learning and skill acquisition. The principal aims of the programmes should be:

   i. to provide the young people with a continuing and appropriate educational experience based on a combination of a common-core of learning objectives, vocational sampling and occupational skills;

   ii. to bridge the gaps that currently exist between the education sectors, education and work, and between education and training courses;

   iii. where appropriate, to provide progression to and 'credits' in further programmes whether they be existing courses, traineeships or competency based apprenticeships.

c. While the system should be devised primarily to meet the needs of the 16-19 age range, it is essential that:

   i. it be sufficiently flexible to allow entry at a higher age, both for initial training and for retraining later in working life;

   ii. the system include programmes designed to meet the needs of minority groups, e.g. ethnic, physically or mentally handicapped, other special needs; including the possibility of extension of the training period for those with special difficulties;

   iii. the system uses a variety of places and modes of attendance for while building on existing provision the quantitative requirements for education and training places will require the full participation of all facilities including schools and colleges and industrial training centres;

iv. total provision would take account of existing courses in schools such as City & Guilds Foundation courses and those like BEC and TEC, run in collaboration with Further Education. In many parts of the country there is existing good practice, the value of which must be retained and extended.

v. it is important that from an early age there is a programme of appropriate and continuing vocational guidance with parental involvement to allow full use of the system.

d. The new 17+ qualification needs to be an integral part of the total system of education and of training young people. The examination must take such a form as to be equally available in FE and schools.

e. A national framework with local implementation should be established for both the content and assessment of such programmes, in order to ensure nationally-acceptable standards notwithstanding the disparity of provision. Assessment should include a profiling system of recording experiences and mastery of skills and knowledge, and should maximise the possibility of easy transfer and progression between stages in the system. Further proposals are elaborated in Appendix B to this report.

f. To ensure the successful implementation of the new programmes it will be necessary to introduce as a requirement:

i. initial teacher-training for all teachers of these young people, involving academic, technical and pedagogic qualifications;

ii. national standards of training competence for industrial tutors and trainers along the lines of the Meister training in the Federal Republic;

iii. a developed system of in-service courses for existing qualified teachers and trainers in order to orient their teaching skills towards the special needs of the new system.

g. The Government concerned should commission an expanded programme of action-research, using such agencies as the FEU and the MSC. Such a programme might include the promotion and co-ordination of curriculum development initiatives, the evaluation of experiments and the dissemination of their results. A further discussion of the problems is in Appendix C to this report.

h. The grading of the education elements of these programmes should be reviewable. At present, under the Burnham FE Report, such work is graded in Category V, the lowest category.

i. A number of important financial questions, arising from the introduction of a comprehensive system of education and training, will require detailed discussion with interested parties. These questions include particularly:

   i. the levels of payment (wages, grants, allowances) to young people in full-time education or following the new programmes of education and training;

   ii. the responsibility for meeting the training and study costs of the new programmes;

   iii. the need for greater co-ordination of budgets for education and training;

   iv. longer-term funding of this work, say five years instead of the present one year.

APPENDIX A : THE DUAL SYSTEM

A1 The Federal Republic of Germany comprises the 11 Länder (States) and under the basic constitutional law of 1949 they are responsible for all educational matters. At that stage of the establishment of the Federal Republic there was a distrust of strong central government and a determination to establish the Länder as autonomous in these matters. Some co-ordination is nevertheless needed since for example the Basic Law guarantees the freedom of movement, the freedom to choose one's place of work, and one's place of education. Therefore the Länder must co-operate to ensure that the structures, institutions, curricula and leaving certificates are broadly comparable.

A2 The chief organ for co-ordination has been the Ständige Konferenz der Kultusminister der Länder in der Bundesrepublik Deutschland (Standing Conference of the Education Ministers of the Länder of the Federal Republic of Germany) usually known as the Kultusministerkonferenz or the KMK. This was established shortly before the Federal Republic and has made several hundred agreements, being particularly active in the period 1954 to 1964 when much standardisation was achieved. Success here is in part due to the fact that within each Land a tight central control exists.

A3 This has in effect standardised the first (or compulsory) stage of secondary education into three main types of school in which the first two years are an orientation stage with syllabuses common to all types of school so children can be easily transferred if their original placement proves unsuitable. Selective schooling is still the norm.

a. Hauptschule (secondary modern or main school) attended by half the age group, and offering classes up to Grade 9 (15 years).

b. Realschule (technical grammar) attended by a quarter of the age group, and offering classes up to Grade 10 (16 years). Students can then take the Mittlere Reife (intermediate certificate) which is an entry qualification to full-time FE (Fachoberschule). Alternatively, students may leave full-time schooling and take up employment, usually with on-the-job training, and with compulsory day release.

c. Gymnasium (grammar school) attended by a quarter of the age group, and offering full-time academic courses up to Grade 13 (19 years), preparing students for entry to higher education.

The exact proportion of entry to each type of school varies from Land to Land.

A4 Through the KMK an agreement has been reached that all Länder shall experiment with the Gesamtschule (comprehensive school). Full integration is difficult because the leaving certificate for the traditional three types still dominates employers' minds. Some Länder are more enthusiastic about this provision than others.

A5 At the end of compulsory schooling about 60% of the young people leave and take up a vocational training contract. The traditional (and basic) system of vocational education and training in the Federal Republic of Germany is known as The Dual System. Under this system a young person on a training contract or apprenticeship receives appropriate vocational training in the firm with which the contract is made and also, by Law, has to attend a vocational school for one day a week where an appropriate vocational education is provided. This system is in essence well established and is generally highly regarded. Maintaining co-ordination in the system is not easy.

REGISTRATION OF BUSINESSES

A6 All business activities (individuals or firms) must register with the local Chamber (Kammer) and pay the appropriate fees to the Chamber. The Chambers are established under public law, are non-profit making, have compulsory membership and achieve high participation by members in electing and participating in the collective affairs in the main Council and its committees. They provide a wide range of services and advice to their members, some providing stock exchanges and export guarantees. They also provide a mechanism for co-ordinating opinion on public issues of economic affairs, economic development, trading law, tax and education and feeding this co-ordinated opinion to Federal and Land authorities. The Chambers have a regional basis. There are also voluntary organisations that have an industry or sector basis.

A7 Most firms register with the local Industrie- und Handelskammer (Chamber of Industry and Commerce) but firms carrying out activities within the defined list of 125 'Handwerk' trades may register with the local Handwerkskammer (Chamber of Crafts). Most firms in 'Handwerk' are small. They are the butchers, the bakers, the cabinet makers, the jobbing builders, the hairdressers and so on. Frequently, when they grow large, or diversify, they transfer their registration to Industrie- und Handelskammer.

A8 Currently the detailed arrangements and legal authority of the Vocational Training half of the Dual System derive from two main Federal Acts:

a. Berufsbildungsgesetz - 1969 (Vocational Education Act)

b. Berufsbildungsförderungsgesetz - 1981 - (Vocational Education Development Act)

The object of initial training is defined in the 1969 Act as follows:

> *"to provide through a systematic training programme a broadly conceived basic preparation for an occupation and the necessary technical abilities and knowledge to engage in a skilled form of occupational activity. Initial training shall also enable a trainee to acquire the necessary occupational experience."*

A9 Under the Berufsbildungsgesetz (see A8A) the basic position is as follows:

a. All training contracts must be registered as being for one of the 460 or so occupations defined and established by the Bund.

b. The training contract must be registered with the Chamber with which the employer is registered (all businesses must be so registered) and supervised by that Chamber which will conduct the terminal examination and test for the award of skilled status.

c. The training and testing will be within and to standards established in the Ausbildungsordnungen (Training Regulations) issued by the Bund.

d. All workers on training contracts are guaranteed day release for the length of the contract (under Länder law derived from KMK agreements all workers under 18 - with or without training contracts - are required to attend Berufsschule on day-release).

A10 By long tradition the Ausbildungsordnungen are issued by the Bundesministerium für Wirtschaft - BMW - (Federal Ministry for Economic Affairs but in practice since the establishment of a Bundesministerium für Bildung und Wissenschaft - BMBW - (Federal Ministry of Education and Science) in 1969, the detailing of these is supervised mainly by the BMBW. In practice the bulk of the work is carried out by the Bundesinstitut Bundesinstitut für Berufsbildung - BIBB - (Federal Institute for Vocational Training), a large research and development institute largely responsible to and established by BMBW but having a measure of independence. BIBB also conduct basic research, statistical monitoring and develops teaching and training materials and equipment.

A11 The Länder co-operate to provide appropriate vocational education and through the KMK issue Rahmenlehrpläne, appropriate syllabuses in an outline form thus providing a comparability of education between Länder. Most Länder have a process of further detailing this syllabus and providing advice and teaching materials to the Berufsschule. In more recent years KMK and the Bund have agreed a process for the co-ordination of a simultaneous revision of the Ausbildungsordnungen and Rahmenlehrpläne (this is described in Item 1 of the bibliography contained in Appendix I). This further improves the process of co-ordination.

A12 While it is always difficult to establish precise comparability between standards in different trades or subjects, it is still clear that many Ausbildungsordnungen (and Rahmenlehrpläne) are not of comparable levels of difficulty or achievement when compared to 'skilled trades' in the United Kingdom - UK. Most require a three year period of apprenticeship, some two and a half, some four. Some regulations in the older minority trades were last revised forty years ago but the 'big forty' that encompass 80% of all apprentices are recent. In all the system provides a powerful and systematic training.

A13 Industry and the KMK have agreed to experiment with a new Berufsgrundbildungsjahr (Vocational Education Foundation Year). This is to provide a first year apprenticeship (or equivalent) in which the education received is broadbased and related to one of thirteen Berufsfelder (Vocational Fields) rather than one of the 460 defined trades. The student objectives are that they will be able to:

a. identify, understand and evaluate the general relationships between work, the economy and society and his own position in working life and society;

b. make a more informed decision on career choice;

c. be occupationally mobile;

d. be equipped to meet the specific demands of vocational training.

The experiment exists in co-operative form with industry releasing students to general education, and in full-time form in Berufsschule.

A14 The aggregate provision for young people then can be expressed as follows:

14% in full-time general education aiming for higher education

14% in full-time vocational courses aiming for job entry at technician level, or late apprenticeship

65% encompassed in the Dual System

3% employed as (unskilled) young workers

4% unemployed with access to a variety of extensive one-year provisions

A15 The above implies a high level of general society commitment to and respect for training. The monetary and social status of the skilled worker in FRG is high, and this is often seen within FRG as well as the UK as a key to the success of the West German economy. It should be added that the further status of Meister (Master Craftsman) may also be regarded as crucial to the status of skilled worker. This higher status is achieved by further study after experience as a craftsman, and grants are available from the Bundesanstalt für Arbeit - BFA - (Federal Labour Office) to support these studies. In law one must be a Meister to register and practise certain

trades, to be an employer, to take on or supervise apprentices. Many large firms also make this a normal qualification for supervision in work places. Furthermore skilled status gives access to further training for the qualification of Techniker (Technician). [18]

POLITICAL ASPECTS

A16 The Industrie- und Handelskammern are organised into regional, Länder and Federal level organisations for the purpose of influencing matters of interest to them. This also applies to the Handwerkskammern. This provides a regional basis of influence. Organisations in Industrie may voluntarily join both *'industrial'* organisations for *'sector interests'* and employers organisations for collective bargaining. Local, regional and Federal level organisations exist. Meisters in the Handwerk trades may join trade specific Innungen (Guilds); again, local, regional and Federal level organisations exist.

A17 At the Federal level, the Kuratorium der Deutschen Wirtschaft für Berufsbildung (Kuratorium of German Industry for Training) has been established to co-ordinate opinion on training from the large number of Federal organisations that have come to exist.

A18 The trade unions - TU - play a large part in the system. They are well informed, well staffed and have clear and coherent policies. The political system of the Federal Republic recognises 'the social partners' of employers, employees and the state as having a corporate responsibility for the affairs of society. This is expressed at all levels. The board of management of the Bundesanstalt für Arbeit, for example, is composed of equal representation; local committees for the BFA are so composed; BIBB includes TU representation on its board of management; the Chambers of Industry have TU membership on the committees that oversee apprenticeship training and testing; TU membership on Länder committees; and so on. Pride in skill is maintained in a corporate way which maintains status differentials.

HANDWERK

A19 Large scale national and international activity in manufacturing industry and commerce is supported by a vigorous economic policy to maintain small-scale craft (Handwerk) industries which are specifically recognised as important partners and suppliers to large scale industries. The policy of the Federal Republic for the support of Handwerk, and its associated training, must be seen as a major part of economic policy within the Federal Republic of Germany.[19]

A20 In total the range of cultural, social economic and political support for recognised skill and training in FRG is massive. It would be difficult to transfer to the UK.

(Revised July, 1983)

APPENDIX B : A MORE DETAILED NOTE ON THE IMPLEMENTATION OF THE PROPOSALS OF THE VISITING PARTY

B1 It should be recognised and emphasised that transition to work should be available and applied across the curriculum and for all children irrespective of whether they are going to University or not. An opportunity should be provided in schools during this particular year (15/16 and possibly continuing into 17 for the slow learners who stay on at school), to absorb a knowledge of basic skills that are necessary and meaningful in industry and commerce.

B2 At 16 or 17 in the UK situation it would be desirable for all young people who leave school to have had some kind of progressive assessment. These could include regular examinations taken from the selected offerings such as 'O' levels, CSEs, but may also include some of the skill modules mentioned above. Employers look for and demand that such information that the school possesses which would be of value to them in selecting trainees and apprentices should be passed on at this stage. A profile would, therefore, be of great value to the child in seeking employment and in making the transition from the school to work situation. The profile could be taken by the school leaver into the industrial or commercial situation and could be added to as appropriate from the lists of basic skills to be prepared on a national and regional basis, so that where the individual school leaver felt that the direction or orientation of the work which they were doing was leading in a particular direction could, in fact, seek a particular six to eight week module in that particular area of activity. It could be, for example, that a young person who had taken modules in metalwork, machineshop work and welding, ended up in a garage situation and would wish to add a motor vehicle module and even perhaps a secretarial module if the garage was small and the proprietor was apt to leave the individual trainees very largely to their own devices.

RECOMMENDATION

B3 We should not, in fact, unnecessarily adopt any rigidity from the system of FRG. A system based on skill-modules would be far more appropriate to the British situation and the use of a profile which could be added to in accordance with the young person's transition during the first two to three years of working life would achieve better results and would provide for that mobility which is seen to be desirable by all concerned. On leaving school, there should be some formal system of registration so that all young people between the ages of 16 and 19 should be registered either for further or higher education, part-time education, vocational preparation, or skill-modules with the MSC.

B4 Who should carry out this registration may not be obvious in the British system. In the Federal Republic of Germany it is done very largely by the head teacher of the last secondary school attended. This probably would not be feasible in the UK and it could probably better be done when the child goes to register for employment. It should be made obvious to the school leavers that there is an obligation to register for some form of training, apprenticeship or employment and that failing to do so could interfere with obtaining social security benefits. If this could be linked-in in some way to the social security system so that every young person requesting social security would be obliged to provide evidence that they were, in fact, attending some form of part-time vocational education.

B5 In FRG the training places on offer are regulated by the Chambers, these being members of national organisations which advise the Government on manpower and economic planning. The Chambers in turn administer through their members the recognised apprentices in their area. There is no way in the UK that such a system could be operated by local Chambers. However, it could be considered desirable for each region to have a local training committee which might even be reflected at local level, say at borough level, by a training committee composed of employers, Unions, and teachers. Such training committees would then have to take on board some of the functions operated in the FRG by the Chambers, that is to interpret the training regulations which are produced nationally and to inspect the firms which are offering training places. This local control of training in the Federal Republic represents the most attractive feature of the whole apprenticeship system. It is obviously effective because the employers are very much involved in training and regard their training scheme in the locality as being of local, regional and national significance. In effect, the examinations set at the end of the apprenticeship or traineeship period are national and consist of a theory paper, a practical piece and an oral examination. The apprentice or trainee then gets an appropriate certificate from the local Chamber.

B6 There are already established in the UK very good apprenticeship systems in many trades and occupations. It would not be desirable to disrupt all of these except that some could be shortened or otherwise modernised.

RECOMMENDATION

B7 It would be a mistake to undo the parts of the UK system that are already working well. In fact, from an observation of the apprenticeship system in FRG with its Dual System, the best employers in Britain are certainly providing equal or better training than the ones we saw. It is obvious that the introduction of such traineeships and short apprenticeships cannot take place overnight or be as comprehensive as the 420 different schemes on offer in FRG. What is important is to set up the process whereby this gradual extension of traineeship places can occur. It would be feasible, for example, to aim to have 150 or so traineeships on offer by the end of the third year and, say, 300 by the end of the fifth year.

B8 These 300, together with the older traditional apprenticeships now on offer, suitably modified and re-negotiated as to content and length, with the appropriate Trade Unions would then form a package similar to that adopted in FRG. One would comment, however, that much of the system in FRG is still very traditional. Many of the training regulations have not been revised for many years and much of the processes involved are based on out-dated methods and skills. It should be evident that an extension of the modular system of skills mentioned as appropriate to the 15-16th year in the schools could be extended into longer and more profound modules during the trainee or apprenticeship period. For example, metal machining could be broken down as in the ILO system into modules for the lathe, the milling machine, the grinding machine, the shaping machine, etc. so that not all the apprentices need do all the modules in the metal machining area. A tool-maker, on the other hand would, in fact, be required to do all the modules and his length of training might therefore be extended in order to account for this, whereas a motor vehicle mechanic operating largely on his own in a small workshop may only need a lathe module and, say, a milling machine module added to a welding module.

B9 For training in welding, as an example, since it is a process employed in many metal work trades there could be successive modules of increasing complexity so that an apprentice preparing himself during his three years or so could eventually achieve a higher degree of specialisation in a particular area of metal machining or metal forming and joining or in metal fabrication, ending up with a profile that appeared to suit best his employment prospects.

CURRICULUM DEVELOPMENT

B10 In the field of vocational and craft training in FRG, this is carried out at National level by joint committees of employers, Unions and the education service. It was admitted that much of the curriculum development was based upon compromise between these points of view. This can be avoided in the UK. We already have, for example, the Royal Society of Arts, the City and Guilds, TEC and BEC, who are all skilled in curriculum development and do not feel the need to be swayed in any particular direction either by employers or Trade Unions. This divorce of the curriculum development process from the political aspirations of either employers or employees is a vital factor in the UK system and a strength that should be capitalised. Where further curriculum development is needed, any of the existing organisations could be invited to prepare suitable modules. These could then be given approval by, say, the Manpower Services Commission, in which employers and Unions were equally represented.

B11 The visiting party remained unclear whether the curriculum development process in FRG has achieved a proper integration between theory and practice or not. Adequate curriculum development, based on rational skill analysis and clustering, will achieve this integration and make sure that adequate theory exists alongside the practice for each module that is

prepared. In testing and in skill acquisition we should learn something from the Canadians and from the ILO system. Curricula should be based on proper behavioural objectives and the tests should be based on criteria, referenced performance and testing, as developed in the Canadian system.

STRUCTURE OF TRAINING AND EDUCATION

B12 As it is unlikely, in the near future, that the Department of Education and Science will be linked in some way with the Department of Industry, it will be essential for a co-ordinating mechanism to operate at a sufficiently high level for the process of education and training to be implemented simultaneously and not fractionalised as it is in FRG. Although the co-ordination system, developed in FRG between the Ministries of Education and the Chambers appeared to work, it is in fact clumsy and based upon historical precedents that do not operate in the UK system.

B13 Having established a process in the UK system for adequate curriculum development using existing development agencies, such as TEC, BEC, City and Guilds and the RSA, the authorities offering modules within the scheme, whether they be further education colleges, MSC establishments or private organisations, employers, group training schemes and the like, should conform to a fairly rigid and laid down system of progression. This could be worked out at a fairly high level in fairly general terms without necessarily interfering with the flexibility that could be so desirable in a new training plan. The local supervision of traineeships and apprenticeships by a local training committee would then operate in a framework of rules and regulations as occurs in FRG without the tight and rigid system which applies there. There should be on offer sufficient modules, courses and the like to enable the local training committee to be highly selective in its use of the offerings from the various curriculum development agencies. This selectivity would then lend particular character to the activities of a local training committee in a particular area so that it could better match the young people leaving school with the job opportunities available.

B14 The question arises *"Who should manage and operate the local training committees and provide the secretarial back-up for them?"* There would be several options. Firstly, they could be managed by Local Government. They could be funded through the rates and be part of the Local Government service. Secondly, they could be managed by Regional Advisory Councils - RAC - which at present control the nature and content to some degree, of the FHE programme on a regional basis. The RAC has the advantage of being independent of political control. Thirdly, they could be operated and managed by the Manpower Services Commission, although, in this case, education, if not sufficiently represented, would make them suspect as to motives. Finally, they could be set up as completely independent organisations with an inspectoral function operated through existing Inspectors of the local and regional educational bodies reporting upwards to the DES.

B15 This probably would not be popular with employers but, in fact, could be less political than some other forms of organisation mentioned above. Whatever structure is adopted in keeping with the cultural orientation and value systems adopted in British education and training to this date, it should be grass-roots-centred and not organisation-centred. This means that all decisions and policies should arise from local training committees and not be superimposed from above.

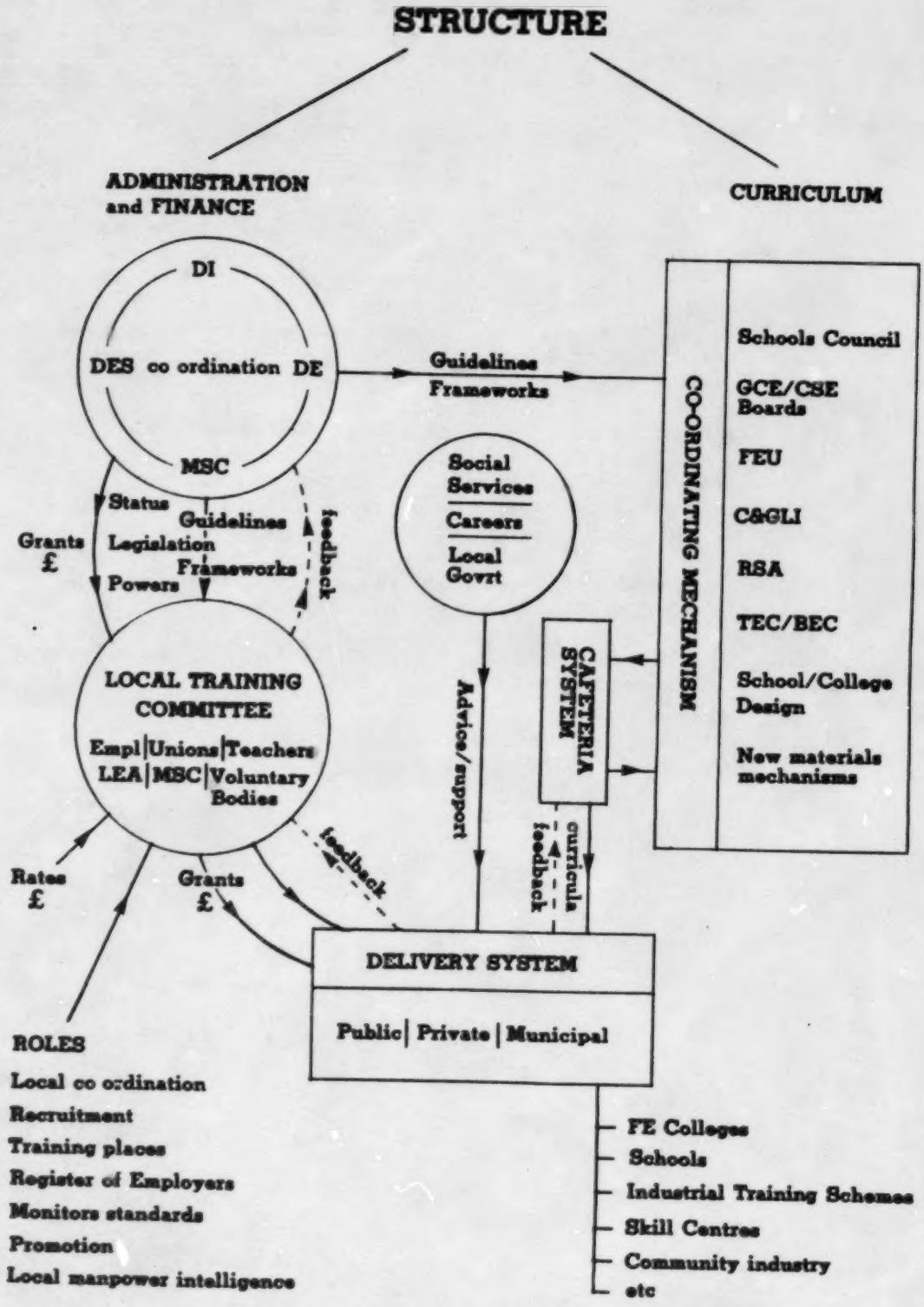
RESOURCES AND FUNDING

B16 The opportunity now exists from 1982/3 onwards, to introduce gradually a comprehensive system of education and training for all young people. The opportunity exists because the falling birth rate will free up to 3% of places in Further and Higher Education Colleges each year for approximately ten years. These resources and places can be used to develop the new training and apprenticeship schemes, not solely based on further and higher education but jointly administered by Manpower Services Commission, the Colleges, by local industry and group training schemes. The group training schemes observed in FRG, appear to be the most effective in the presentation of the BGJ year and of the Dual System with adequate periods spent on the job and off the job in training. More incentives should be provided for groups of small firms to get together and provide group training schemes on a local basis, managed, operated and inspected by the local training committees mentioned above. This, one felt was a very desirable aspect of the system in FRG.

B17 Some readers may find the diagram overleaf a useful summary of this Appendix.

(January, 1982)

Diagram summarising Appendix B



APPENDIX C : A NOTE ON THE PROCESS OF INTRODUCING CHANGE WITH APPLICATION TO THESE PROPOSALS

C1 The innovatory sequence as defined by Rogers and Shoemaker (in *Communications of Innovation*[20]), states the sequence in the following form:

a. Develop a need for change.

b. Establish a change relationship.

c. Undertake a diagnosis of the problem.

d. Create an intention to change.

e. Translate the intention into action.

f. Stabilize the change.

g. Achieve a terminal relationship.

C2 It would appear to be obvious from the visit and replies to various questions that the Dual System has been introduced over a sufficiently long period of time for it to become an accepted process and practice in the Federal Republic of Germany. On the other hand, the BGJ year appears to have been introduced for political and social considerations which may or may not actually be fulfilled in the short term. The BGJ, although still on a small scale, can only be regarded as a pilot project and a part of an innovatory sequence. If BGJ or a continuous process of orientation from the age of 14 to the age of 19 is to be introduced starting with orientation to work followed by unified vocational preparation and formal apprenticeship is to be achieved in the UK this should be seen and treated as a major innovation in the training and educational area.

C3 The experience of the French in introducing the ITUs into the educational system, reported upon by Grignon and Passeron,[21] should inform the authorities in the UK of the pitfalls which can occur when a major innovation is introduced without adequate preparation or without adequate attention to the innovatory sequence defined above. If this process is not followed through then large sums of money can be spent, existing systems which worked perfectly well can be distorted and, in the end, the objectives of the change may not be achieved. In this case the innovation would prove to be a false innovation as in the French system.

WHAT NEEDS TO BE DONE NOW?

C4 In recent years a number of surveys have been carried out in this area. An initial survey of one year pre-employment courses

for students aged 16+ was carried out by Garnett College in 1978. This led to the document *Basis for Choice* and, of more recent date, the MSC document *A New Training Initiative*, issued by the Manpower Services Commission. The comment on the *New Training Initiative: Skills for Working Life* Report on a residential conference at Stoke Rochford, dated 24 June 1981.[22] In curriculum development there is the whole movement in the USA and Canada towards competency-based education which, in the opinion of British educators, has particular relevance in the craft and vocational area. The process has started in which the need for change is becoming obvious. This has been accentuated of recent years by the large numbers of school leavers who have been unable to find a meaningful traineeship or apprenticeship leading to an adequate career path in life.

C5 It could be that employers need to be rather more convinced and committed than they are at the present time although it was apparent from the last CBI Conference that they are aware of the problem. However, they have not yet taken positive action to improve the number of training places on offer. It had been the intention of previous Training Acts establishing the Training Boards to encourage employers, through the levy-grant system, to set up training schemes and to offer more trainee places throughout industry and commerce as a whole. This obviously has not happened to a sufficient extent and many school leavers are unable to find a place within the present system. Whereas, in the Federal Republic of Germany, over 90% of school leavers between the ages of 15 and 19 are in some meaningful training or apprenticeship. In the UK the number of official places has been falling and will fall by a further 20,000 in 1981-82.

THE FIRST STEPS

C6 Change relationships have already been established. These need to be strengthened and reinforced at all levels. Essential in the establishment of change relationships is the identification of the change Agents. In the UK situation there are many available. The FE Colleges, the Manpower Services Commission, the Local Councils, the Teacher Training Colleges and the Universities. The whole set up of Adult Education, well-developed in the UK, also offers opportunities for change.

C7 Both the *Consultative Papers* and *The Agenda for Action* for a New Training Initiative appear to have been well received. It now needs to be followed up to some extent by a propaganda exercise in colleges, with employers and schools to broaden the range of the people who are involved and informed about the initiatives which are to be undertaken.

TRANSLATING THE INTENTION INTO ACTION

C8 At this stage a certain amount of minimum legislation may be necessary in order, for example, to introduce new elements into Secondary School curriculum so as to widen and amplify the unified vocational preparation period for some children and in order to extend part-time education for all children on a

compulsory basis. Mechanisms will need to be defined whereby the Local Training Committees, if these are to be appropriately set up and nominated, can operate within existing legal frameworks and have some statutory responsibilities allocated to them. One or two pilot schemes are already under way in Coventry, for example and the North East. These should be intensively studied at this stage to see how the Local Training Committees are performing their work and, at least a dozen others should be set up along similar lines in other areas of the country as a first priority.

C9 Within six months to a year, on the basis of this experience it should be possible to identify the chain of responsibility from DES, Manpower Services Commission, other Ministries, down to the Local Training Committee and to set up some form of minimum legislation giving this particular process a statutory coherence. Alongside and in parallel with this, all the various curriculum development agencies mentioned in Appendix B could be set to work to prepare the various training modules, syllabuses and courses envisaged in the whole package from 14 through to 19. This may be seen as a process of adding to what is already on offer rather than replacing what is on offer. All young people in all ability ranges and training for all professions and careers should have some form of route through to professional or craft status available to them.

C10 Finally the whole area of rules and regulations for the payment of allowances to all young people aged 16-19 needs to be sorted into a more coherent single pattern so that at the same time it becomes equitable and just, and provides incentives to both young people and the firms which provide training.

CONCLUSIONS

C11 The final aspects of the innovatory sequence stabilising the change and achieving a permanent relationship should not apply for three or four years from the start date. However, certain preparatory stages need to be identified in the early legislation. These preparatory stages involve responsibility for the process. They involve definition of the power structure within which the innovatory process will continue and will survive into a stable state.

C12 An important aspect of the preparatory stage and an aspect which will need consideration by teacher educators will be a consideration of the best methods of training teachers who may be involved in this process of transfer to work and early apprenticeship/traineeship in the period 14 to 19. This particular age group is not yet identifiable within further and higher teacher training as a separate phase although options are on offer in the four Colleges of Education (Technical) at the present time and many short in-service courses have been provided. The question is *"Does existing provision make adequate arrangements for the training of the teachers who will be required to service the new courses in the 14-19 age group?"*

(January, 1982)

APPENDIX D : A PERSONAL UPDATING

D1 This new appendix has been written as a personal attempt to relate the study both with subsequent findings of other groups and developments in YTS since the report was made. This appendix is a personal comment.

D2 Perhaps key to the concerns of the group about the BGJ is their comment

> *"It is an abstraction from an already existing legally recognised training and from that derives its recognition."*

(See paragraph 58).

Of course the lack of acceptability of the BGJ(S) derives from its lack of work-experience and its lack of employer-based testing. Compare this situation to the YTS.

D3 The content of most YTS schemes is employer-based and thus has work-experience, but the guidelines and occupational-family structures are extremely weak in the context of rather ineffective monitoring systems to give any credit worthiness of the YTS in terms of exemption from any other form of training. Put another way, the problem remains: will the typical employer X take the YTS trainees from typical employer Y for systematic second-year training? Although the C&GLI will attempt some profile recording and assessment of the YTS experience will this be enough to guarantee an easy recognition by other employers (Y^N) of employer X's training? Such guidelines that exist are often expressed as process skills rather than modules of content. If the assumption of transferability is correct it will remain to convince employers that this is a better scheme than a modular one (see paragraph B8).

D4 It remains true that the first objective of the NTI is to reform all initial skill training, and to build on the traineeships which constitute the output of the second objective of the NTI. Thus the new YTS should not be seen as feeding an old-fashioned easily-recognised training and training standards but a new reform situation. I remain sceptical both that the reforms will be easy and that the two objectives, implemented by different branches of the MSC, will co-ordinate easily.

D5 Of course the new training system will not stabilise yet, but the task of the YTS monitoring system will be to receive the revised training objectives from the Occupational Quality group of the MSC and encourage regular adaptations of the YTS schemes to do this while not losing the reformist innovative thrust of the YTS. Not an easy task.

Russ Russell
July 1983.

APPENDIX E : NOTES

1 See Appendix A, paragraph A14 for details.

2 See items 21 and 22 in the bibliography in Appendix I.

3 The term 'Schule' (School) is also used for institutions that in England would be called 'colleges'. The term 'student' is by convention reserved for university students and all others are 'Schuler' (or pupils).

4 At the time of drafting this report the government had not yet issued its proposals for a Youth Training Scheme - YTS. Any response in this report to NTI or NTI-type courses may also be held to refer to YTS-type courses.

5 Bayern (Bavaria): one of the component states of the Federal Republic. It successfully challenged the 1976 Act in the Constitutional Court and it has now been replaced by the 1981 Act.

6 The largest political parties in FRG are :

SPD - Sozialdemokratische Partei Deutschlands
(Social Democratic Party of Germany)

CDU - Christlich Demokratische Union

The SPD is 'left of centre' and the CDU 'right of centre'. Governments at Bund and Länder level are often coalitions.

7 See Item 5 in the bibliography contained in Appendix I.

8 It ought to be emphasised that the employers have expanded full apprenticeship training and are in that sense adapting. The latest figures are :

	Applications Made	Places Offered	Contracts Signed	Places Not Filled	Applicants Not In Apprenticeship
May/Oct 1982	667,000	651,000	631,000	20,000	36,000
May/Oct 1983	655,000?	685,000?	?	?	?

Source: Embassy of FRG, London, Labour and Social Affairs Report, 3/83.

9 See Item 14 in the bibliography contained in Appendix I.

10 See Item 23 in the bibliography contained in Appendix I.

11 See also Flower, F. and Russell, R. *The Industrial Tutor in the FRG*, No.4, Studies in Vocational Education and Training in the FRG, Coombe Lodge Publications, Blagdon.

12 Since this report was made, three further reports (Business Studies, Catering, Hairdressing) have made reference to the BGJ(S) and the BGJ(K). In no case was this use of the BGJ(K) seen as an opportunity for such selective later recruitment in a hierarchy of trades. All three groups discovered that in the eyes of employers the BGJ(S) lacked 'real work experience'. The Business Studies group (Report 5 in this series) found that employers recruited different educational levels to the various trades in their Berufsfeld and thought it wholly inappropriate to mix them for teaching purposes. The Catering group (No.8 in this series) found the employers reporting the spread of trades in the Berufsfeld far too wide and only the Hairdressing group (No.9 in this series) found the employers anywhere near content, but their Berufsfeld only contains one trade!

13 In order to encourage the expansion of systematic training provision the Bundesanstalt für Arbeit - BFA - makes funds available to small employers in order that they may establish Uberbetriebliche Ausbildungsstätten (Group Training Centres). The BFA has a wide range of functions in manpower, manpower planning and research, vocational guidance, unemployment insurance, family allowances. Its head office is in Nürnberg, it has nine regional offices, 146 local offices and 501 branch offices.

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14 The Kuratorium der Deutschen Wirtschaft is an organisation which draws together the employers organisations, including the Chambers, so that they may co-ordinate their policy on Vocational Education and Training.

15 See Note 12 above.

16 Arbeitslehre is a generic term used to refer to the various provisions made in the Länder to introduce the world of work to pupils in the last years of compulsory schooling. There have been various agreements on this provision within KMK, and between KMK and BFA. It is reported on in No.2 of this series of papers.

17 See Items 21, 22 and 23 in the bibliography contained in Appendix H.

18 See also Russell, R. and Parkes, D.L. *Career Development Training in the FRG* No.10 Studies in Vocational Education & Training in the FRG, Coombe Lodge Publications, Blagdon.

19 See also Russell, R. *The Organisation of Craft Activities in the FRG* Information Paper No. 1725, Coombe Lodge Publications, Blagdon.

20 See Item 24 in the bibliography contained in Appendix I.

21 See Item 25 in the bibliography contained in Appendix I.

22 See Items 26, 27 and 28 in the bibliography contained in Appendix I.

(Revised July, 1983)

APPENDIX F : GLOSSARY OF TERMS AND ABBREVIATIONS

ARBEITSLEHRE : Learning about the world of work.

AUSBILDUNGSORDNUNGEN : Training Regulations (issued by the Federal Authorities)

AUSBILDUNGSPLATZFÖRDERUNGSGESETZ : Training Place Promotion Act.

BAYERN (BAVARIA) : A Land of the Federal Republic

BERLIN : A Land of the Federal Republic

BERUFSBERATUNG : Vocational Counselling

BERUFSBILDUNGSGESETZ : Vocational Training Act

BERUFSFACHSCHULE : Full-time Vocational School (usually providing two year courses for 15-19 year olds)

BERUFSFELDER : Vocational 'fields', groups of trades

BERUFSGRUNDBILDUNGSJAHR : Basic Vocational Year

BERUFSSCHULE : Vocational College (usually part-time)

BERUFSVORBEREITUNGSJAHR : Preparatory Vocational Training Year

BREMEN : A Land of the Federal Republic

BUND : Federal Authorities, Central Government

BUNDESANSTALT FÜR ARBEIT : Federal Labour Office

BUNDESINSTITUT FÜR BERUFSBILDUNG : Federal Institute for Vocational Education

BUNDESMINISTERIUM FÜR BILDUNG UND WISSENSCHAFT : Federal Ministry of Education and Science

BUNDESMINISTERIUM FÜR WIRTSCHAFT : Federal Ministry of Economic Affairs

BUNDESPOST : Post Office

BUNDESVERBAND DER DEUTSCHEN INDUSTRIE : Federation of German Industry

DEUTSCHER GEWERKSCHAFTSBUND : German Federation of Trade Unions

DÜSSELDORF : Capital of Nordrhein Westfalen

FACHARBEITER : Skilled Worker - Specialist Worker

FACHOBERSCHULE : Vocational College (full-time)

GASTARBEITER : Immigrant Worker, Foreign Worker

GESETZ : Act (of Parliament)

GESAMTSCHULE : Comprehensive School

GEWERBEFÖRDERUNGSANSTALT : Trades Development Institute (of the Handwerkskammer of Düsseldorf)

GRUNDGESETZ : Basic Law - Constitution

GYMNASIUM : Grammar School

HAMBURG : A Land of the Federal Republic

HANDWERKSKAMMER : Chamber of Crafts

HAUPTSCHULE : Main School, Secondary Modern

INDUSTRIE- UND HANDELSKAMMER : Chamber of Industry & Commerce

KOOPERATIVE FORM : Co-operative Form of the BGJ

KULTUSMINISTERKONFERENZ : Standing Conference of the Education Ministers of the Länder

KULTUSMINISTERIUM : Ministry of Education (of a Land)

KURATORIUM DER DEUTSCHEN WIRTSCHAFT FUR BERUFSBILDUNG : Kuratorium for German Economy and Vocational Education (An Employers Organisation)

LAND, LÄNDER : Component State(s) of the Federal Republic

LEITTEXTE : Work Book - Teaching Material

MEISTER : Master (Craftsman)

METALLTECHNIK : Metal Trades

NORDRHEIN-WESTFALEN : A Land of the Federal Republic

RAHMENLEHRPLÄNE : Outline Curricula

REALSCHULE : Technical School

SCHULMÜDE : School Tired, School Weary

SCHULISCHE FORM : College-Based Form of the BGJ

SONDERSCHULE : Special School

STÄNDIGE KONFERENZ DER KULTUSMINISTER DER LÄNDER : Standing Conference of Education Ministers of the Länder

STUNDEN : Teaching Session (50 minutes - hour)

TECHNIKER : Technicians

WIRTSCHAFTWUNDER : Economic Miracle

ABC	A Basis for Choice : Document published by the FEU	UK
BEC	Business Education Council	UK
BFA	Bundesanstalt für Arbeit	FRG
BGJ	Berufsgrundbildungsjahr	FRG
BIBB	Bundesinstitut für Berufsbildung	FRG
BMBW	Bundesministerium für Bildung und Wissenschaft	FRG
BVJ	Berufsvorbereitungsjahr	FRG
CBI	Confederation of British Industry	UK
C&GLI	City and Guilds of London Institute	UK
CDU	Christlich Demokratische Union	FRG/UK
DGB	Deutscher Gewerkschaftsbund	FRG
EC	European Community (i.e. countries signatory to the Treaty of Rome)	UK
EEC	European Economic Community (i.e. countries signatory to the Treaty of Rome)	UK
EITB	Engineering Industry Training Board	UK
FE	Further Education	UK
FEU	Further Education Curriculum Review and Development Unit	UK
FRG	Federal Republic of Germany	UK
KMK	Kultusministerkonferenz	FRG

ILO	International Labour Office	FRG/UK
ITB	Industrial Training Board	UK
LEA	Local Education Authority	UK
MSC	Manpower Services Commission	UK
NTI	New Training Initiative	UK
RAC	Regional Advisory Council	UK
ROSLA	Raising of the School Leaving Age (from 15 to 16 in 1973)	UK
SPD	Sozialdemokratische Partei Deutschlands	FRG/UK
TEC	Technician Education Council	UK
TU	Trade Union	UK
TUC	Trade Union Congress	UK
UK	United Kingdom	UK
UVP	Unified Vocational Preparation - an experimental course sponsored by MSC	UK
WEEP	Work Experience on Employers Premises - a type of YOP	UK
YOP	Youth Opportunities Programme - a general term for a variety of special measures taken by MSC to provide for the young unemployed	UK
YTS	Youth Training Scheme	UK

(January, 1982)

APPENDIX G : NAMES OF PARTY, PROCESS OF WRITING

The list of people on the visiting party was drawn up by the Further Education Staff College after seeking nominations and was approved by the Department of Education and Science. The names of the visiting party are given below. Before leaving the United Kingdom - UK - for the Federal Republic of Germany - FRG - the party was supplied with briefing material in English and German and met for further briefing. During the visit the group met several times and determined an outline structure to the report, a division of labour in drafting the main sections and the main orientation of the report. On return to the UK the party met at the Further Education Staff College (Coombe Lodge) and jointly worked on the written material. It has been since edited into this form by Russ Russell and Michael Neale, and put back to the members of the party before finalising.

The group benefitted from having access to the reports of the first two visiting parties in this programme and meeting some of them. The visiting party would like to gratefully acknowledge the learning that took place.

The views contained in this report do not necessarily represent the views of the institutions represented or organising the work.

LIST OF NAMES OF THE VISITING PARTY

Name, Post Held	Nominated by:
FELIX BIHLMEIER, Principal Lecturer in German, Bristol Polytechnic.	(Group Interpreter)
ALAN BULLOCK, Head of Department of Mechanical Engineering, Southgate Technical College, London.	City & Guilds of London Institute
TOM CORKILL, Group Advisor, Education and Training, British Aerospace.	Engineering Industry Training Board

BRENIG DAVIES, Development Officer, Further Education Unit.	Further Education Curriculum Review & Development Unit
GWYNETH JONES, Warren Comprehensive School, Romford, London.	London Borough of Barking
BILL JORDAN, Vice Principal, Shirecliffe College, Sheffield.	Further Education Staff College
MERVYN LANCASTER, Senior Principal, Training Services, Manpower Services Commission.	Manpower Services Commission
DEREK MARSH, Staff Tutor, Further Education Staff College.	(Group Organiser)
M. NEALE, Senior Assistant Education Officer, Education Department for Further Education, Leeds.	Society of Education Officers
SAMUEL PEAKE, Senior Lecturer, Hounslow Borough College.	London Borough of Hounslow
A.M. RANKIN, Her Majesty's Inspector, Scottish Education Department.	Scottish Education Department
RUSS RUSSELL, Staff Tutor, Further Education Staff College.	(Programme Co-Ordinator)
JOHN TALBOT, Principal, Garnett College, London.	Association of Principals of Colleges
RICHARD WHEATLEY, Manager, Lucas Engineering Training Centre, Birmingham.	Engineering Employers Federation and the Confederation of British Industry

(January, 1982)

APPENDIX H : VISITS AND MEETINGS

AT FEDERAL LEVEL

Bundesinstitut für Berufsbildung
Bundesministerium für Bildung und Wissenschaft
Bundesverband der Deutschen Industrie
Deutscher Gewerkschaftsbund
Deutscher Industrie und Handelstag
Kultusministerkonferenz
Kuratorium der Deutschen Wirtschaft für Berufsbildung

AT LAND OR LOCAL LEVEL

Ausbildungszentrum, Daimler Benz, Düsseldorf
Ausbildungszentrum, Bloom und Voss
Ausbildungsdirektor, Deutsche Bank, Düsseldorf
Behörde für Schule und Berufsbildung, Hamburg
Berufsschulzentrum, Hennef-Seig
Gewerbeförderungsanstalt der Handwerkskammer, Düsseldorf
Handelskammer, Hamburg
Hiedenrich und Harbeck, Hamburg
Industrie-und Handelskammer, Düsseldorf
Kultusministerium von Nordrhein-Westfalen
Metallinnung, Hamburg
Staatliche Gewerbeschule (Metalltechnik) Hamburg
Staatliche Gewerbeschule (Gesundheitspflege) Hamburg

(January, 1982)

APPENDIX I : FURTHER READING AND REFERENCES

INTRODUCTION TO THE EDUCATIONAL SYSTEM IN THE FRG

The following items are descriptive accounts of the educational system in general

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VOCATIONAL TRAINING IN THE FRG

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Available from BIBB, Fehrbelliner Platz 3, 1100 Berlin 31, Federal Republic of Germany.

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ISBN: 0-907659-13-6

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ISBN: 0-907659-15-2

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ISBN: 0-907659-18-7